ISHIDA

Counter Scale Printer

ASTRA

SERVICE MANUAL

Lb

⚠ WARNING

- Do not carry out installation, operation, service, or maintenance until thoroughly understanding the contents of this manual.
- Keep this manual available at all times for installation, operation, service, and maintenance.

ISHIDA CO., LTD.

Manual No. 0145A

You can help improve this manual by calling attention to errors and by recommending improvements. Please convey your comments to the nearest Ishida Company regional representative.

Thank you!

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SAFETY CONSIDERATIONS

To ensure safe operation, the general safety considerations below must be followed.

Grounding
This instrument is a Class 1 device which requires protective grounding for safe operation.
To avoid potential shock hazards, a protective grounding conductor for the instrument must be securely connected to the main grounding provision by qualified service personnel.

Do not remove covers or enclosures
To avoid personal injury and shock, do not open or remove any covers or enclosures of the instrument unless specified in the manual.

Do not perform unspecified maintenance
For your personal safety, do not perform any maintenance procedures which are not specified in the manual.

Disconnect power supply before servicing
To ensure your personal safety, disconnect the power supply before servicing.

IMPORTANT INFORMATION

CONFORMITY TO EC COUNCIL DIRECTIVES

The instrument is designed in accordance with the following directives.

- Non-automatic Weighing Instrument Directive 90/384/EEC, amended by 93/68/EEC

  Compliance was checked using the following standards:

  EN45501 `Metrological aspects of non-automatic weighing instruments'

- EMC Directive 89/336/EEC amended by 91/263/EEC, 92/32/EEC and 93/68/EEC.

  Compliance was checked using the following standards:

  EN55011 `Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment, Group 1, Class B'

To ensure conformity, any unauthorized modification and/or service on the instrument constitutes a repeal of conformity.

Note: Compliance with these directives is only necessary in EC countries.

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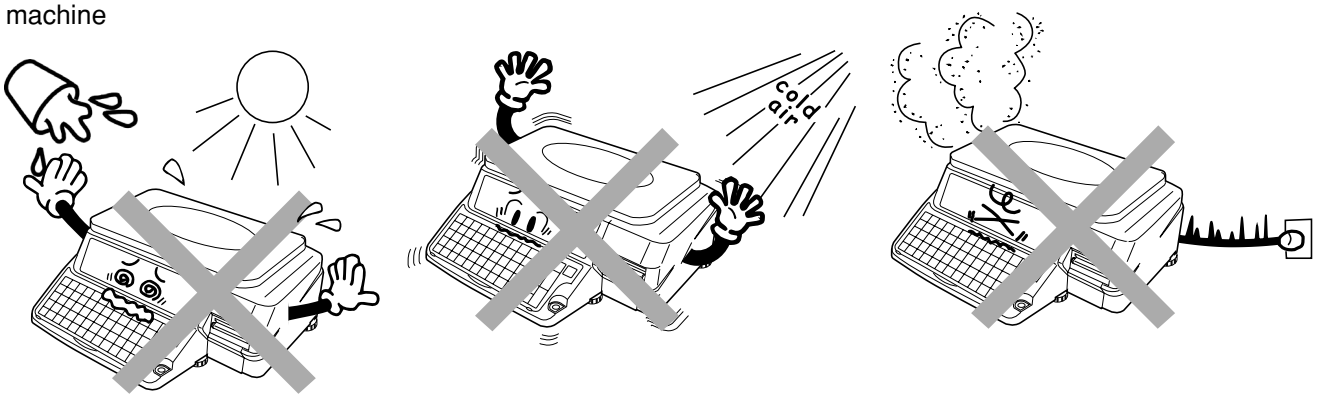
1.1 Cautions for Installation

1.1.1 Installation Areas

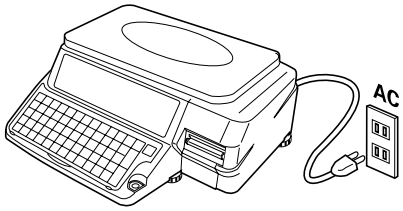
Avoid the following areas when installing the machine.

- Areas subject to high temperatures or high humidity
- Areas exposed to direct sunlight
- Areas where water or other liquids are easily spilled on the machine
- Areas subject to excessive vibration or unstable surfaces
- Areas exposed to direct cold air
- Areas subject to low temperatures
- Areas subject to a lot of dust or dirt
- Areas with large voltage fluctuations



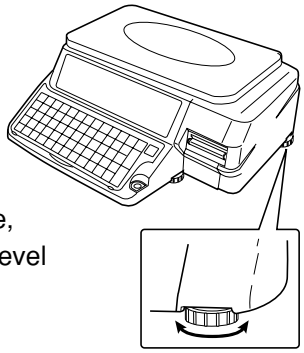
1.1.2 Power Supply

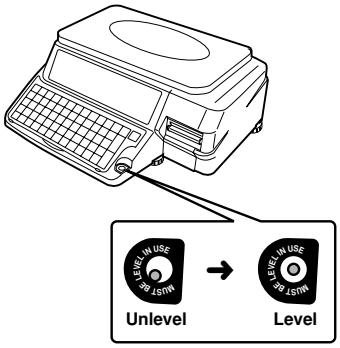
- Use the appropirate voltage after referring to the specification plate located on the machine
- Use a dedicated power source
  (Voltage fluctuation can cause the machine to malfunction)
- Do not stand on, or place heavy objects on the power cord
  (If the cord is damaged and still used, it may cause an accident or other problems)



1.1.3 Level Adjustment

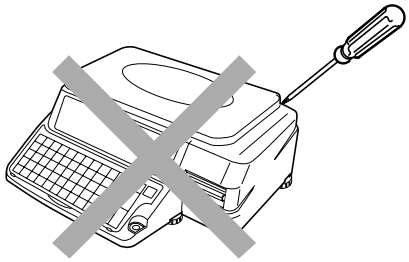
- Always ensure that the machine is level.
  If the machine is not level, weighing may not be accurate.
- Adjust the machine to a level position using the four level adjusters, located on the bottom of the machine, until the bubble is completely centered in the round level indicator.



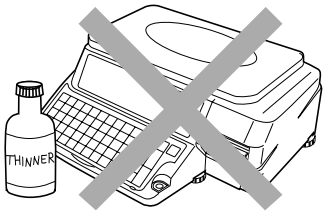


1.1.4 Handling Precautions

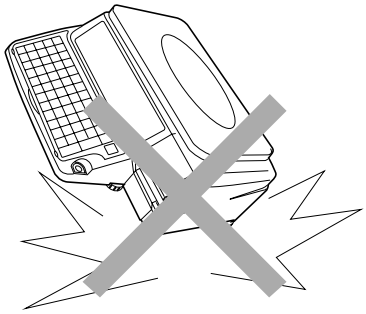
- Only trained service personnel should disassemble the machine as directed in this manual.



- When cleaning the machine, only use a soft dry cloth or a cloth wetted with a neutral cleanser. Never use thinner or other volatile liquids.



- Do not drop or apply strong jolts to the machine.



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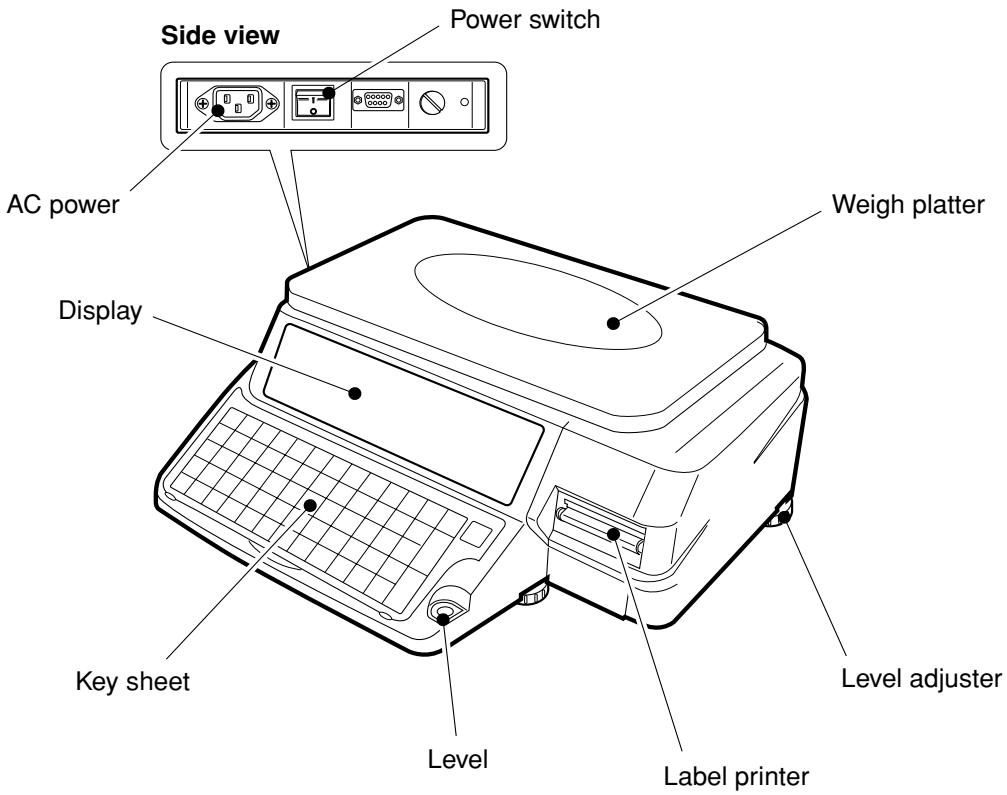
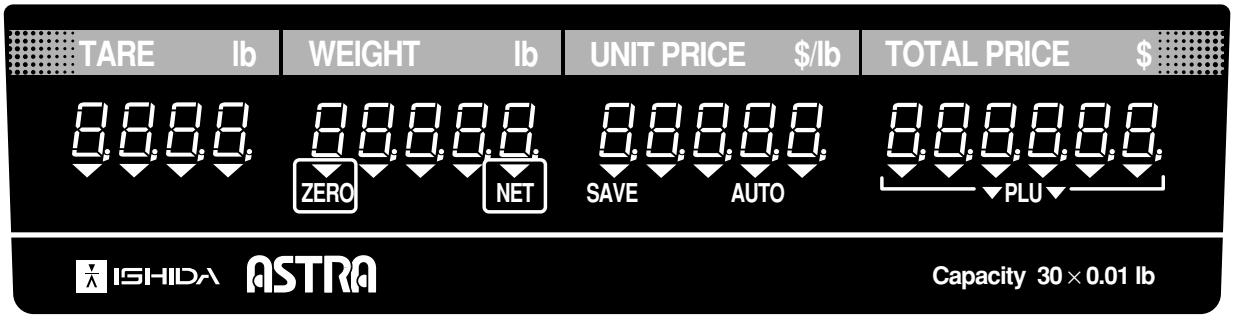
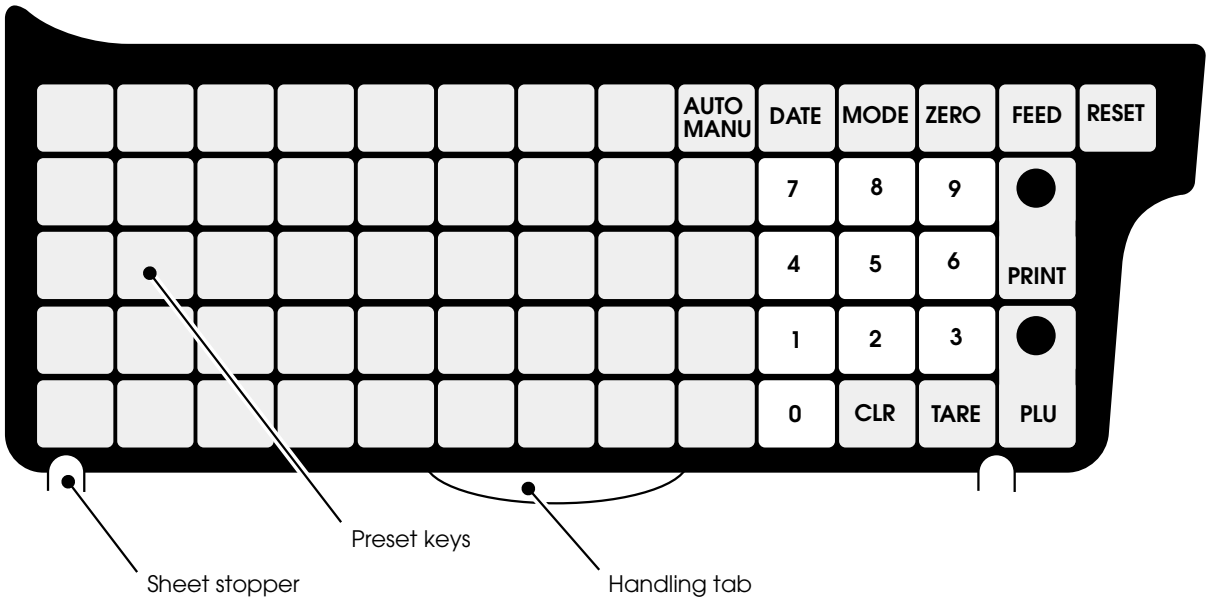
2.1 Appearance



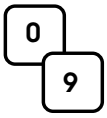
2.2 Display (lb)



2.3 Operation Key Sheet



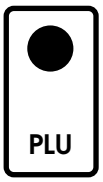
2.3.1 Basic Function Keys



NUMERIC ENTRY
Keys 0 through 9 are used to enter numeric data.

CLEAR
Used to cancel incorrectly entered numeric data.

TARE
Used to set the tare weight to be subtracted from the total weight on the weigh platter.



PLU SELECT
Used to access PLU data.

AUTO/MANUAL SELECT
Used to select automatic label issue or manual label issue.

FEED
Used to advance labels to the correct printing position.

ZERO ADJUSTMENT
Used to reset the weight to zero.

MODE SELECT
Used to return to normal operation mode or to enter a desired mode after 4 digit password entry.

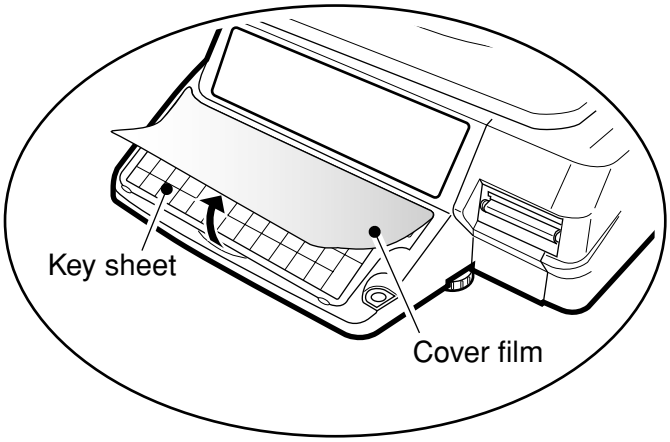
PRINT
Used to issue a label.

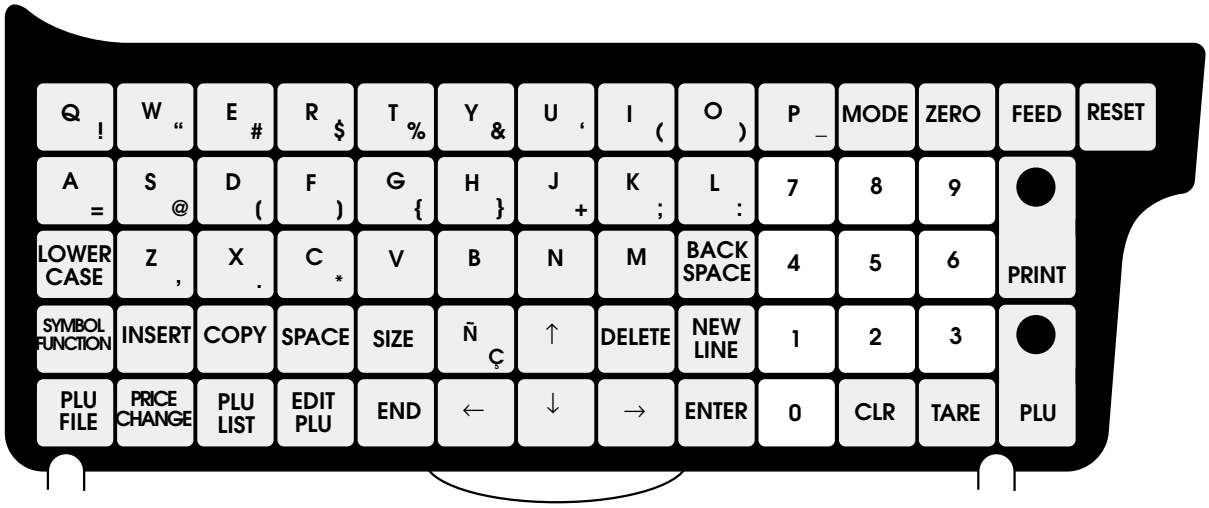
RESET
Used to initialize the machine.

TEMPORARY DATE
Used to temporarily change the current date of the machine. After recalling a PLU, enter the temporary date (MMDDYY) and press the DATE key. Enter the number 0 to turn all date printing off. The date is reset when another PLU is selected.

2.4 Program Key Sheet

The Program Key Sheet is located underneath the Operation Key Sheet. It can be accessed by lifting up the cover film and removing the Operation Key Sheet.



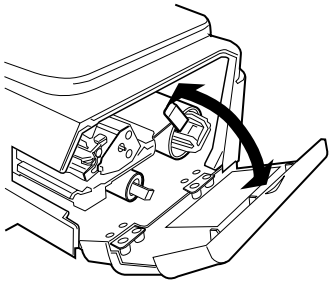

Q ! W " E # R $ T % Y & U ' I (O) P _ MODE ZERO FEED RESET
A = S @ D (F) G { H } J + K ; L : 7 8 9
LOWER CASE Z , X . C * V B N M BACK SPACE 4 5 6 PRINT
SYMBOL FUNCTION INSERT COPY SPACE SIZE Ñ Ç ↑ DELETE NEW LINE 1 2 3
PLU FILE PRICE CHANGE PLU LIST EDIT PLU END ← ↓ → ENTER 0 CLR TARE PLU

Note: Refer to Section 6.2 of this manual for an explaination of the key functions.

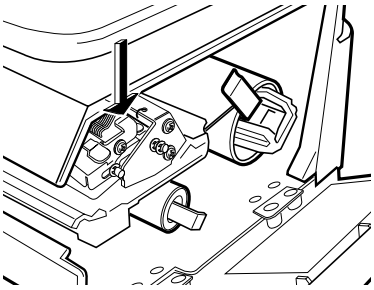
2.5 Loading/Unloading Label Roll

2.5.1 Loading

1. Open the side cover.

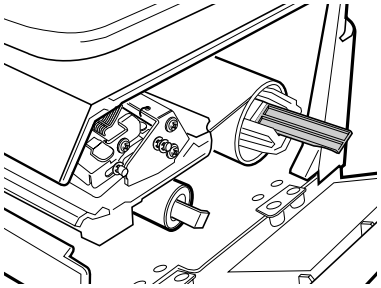


2. Release the printer head by pushing down the release lever (**D**).

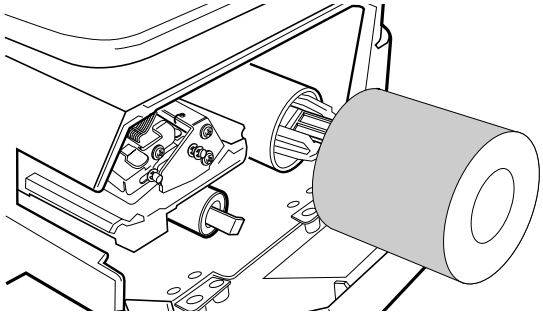


3. Check that the stopper lever (**A**) of the roll holder (**B**) is in the down position.

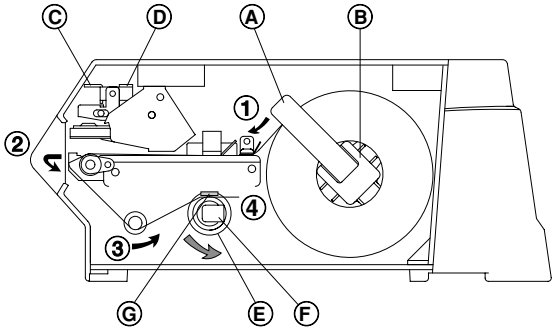
If the lever is in an up position, push down until it lies flat.



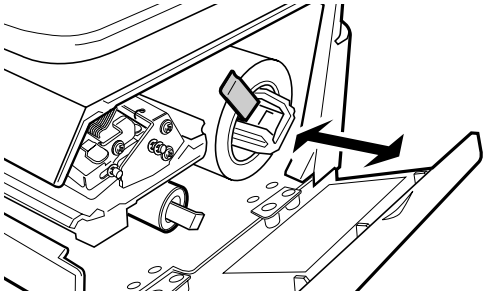
4. Remove approximately 12 inches of labels from the end of the roll. Load the label roll around the roll holder (**B**).



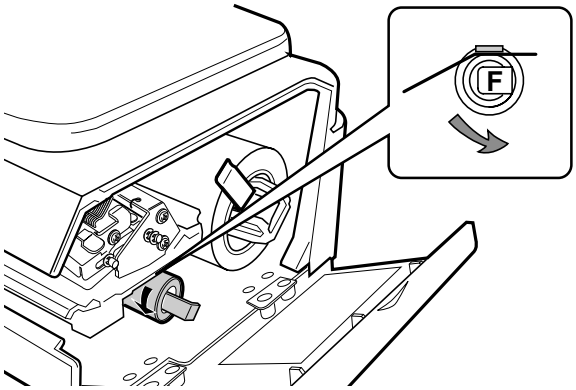
5. Insert the label paper from (**1**) through (**4**).



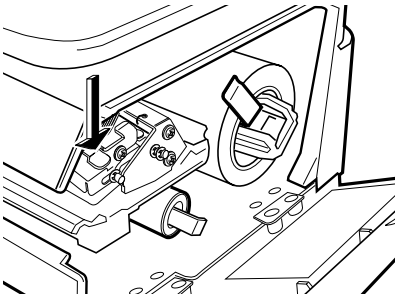
6. Pull up the stopper lever (**A**), then slide it in or out depending on the width of the roll, making sure not to move it too far in and bind the labels.



7. Turn the winding bobbin (**E**) counter-clockwise so that the hook (**G**) is positioned up, push in lever (**F**), then insert the tip of the paper in the hook (**G**).



8. Replace the printer head by pushing down the lock lever (**C**).



9. Press the **FEED** key on the key sheet once or twice in order to securely turn the paper around the winding bobbin (**E**).

Note: *Check that the label printing position is properly set.*

*If not properly set, press the **FEED** key until it reaches the proper printing position.*

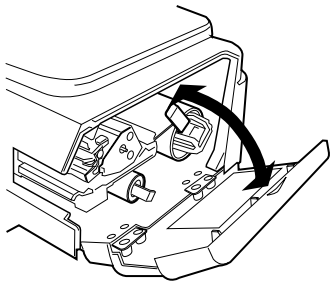
FEED

Press the Clear key to remove any error messages.

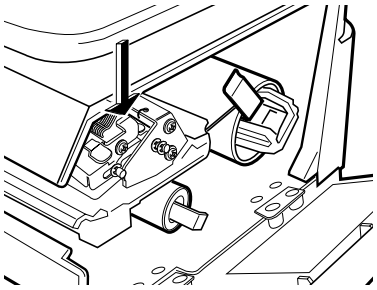
CLR

2.5.2 Unloading

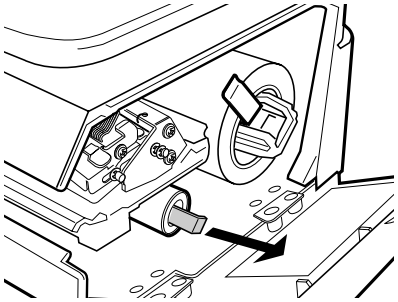
1. Open the side cover.



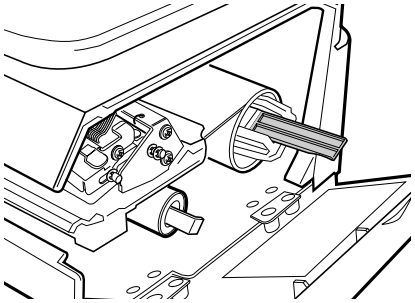
2. Release the printer head by pushing down the release lever (**D**).



3. Pull the lever (**F**) outwards to loosen the paper wound around the winding bobbin (**E**), then remove the paper from the winding bobbin.



4. Push down the stopper lever (**A**) of the roll holder (**B**) to make it straight, then remove the label roll from the path ((**1**) through (**4**)) and the roll holder (**B**).



2.6 ASTRA Hardware Specifications

ASTRA		
Accuracy	1/3000 Single Range	
Capacity	30 lb (15 kg)	
Min. Graduation	0.01 lb (0.005 kg)	
Main Body Dimension	15.75" (W) × 16.34" (D) × 6.50" (H) 400 (W) × 415 (D) × 165 (H) mm	
Platter Size	14.02" (W) × 9.21" (D) 356 (W) × 234 (D) mm	
Weight	Approx. 20.9 lb (9.5 kg)	
Printer Unit	Side-Load Label backing paper width Label width Label printing width Label length Printing speed	 Max. 2.64" (67 mm) 1.50" to 2.52" (38 to 64 mm) Max. 2.36" (60 mm) 1.18" to 3.35" (30 to 85 mm) 3.15"/sec. (80 mm/sec.)
Label Roll Dimension	Inside diameter Outside diameter	1.57" (40 mm) 3.94" (100 mm)
Sensor	Label (Gap) sensor	
Display Unit	Number of digits Character height	Weight 5, U/P 5, Amount 6, Tare 4 0.42" (10.6 mm)
Keyboard	64 keys in total. 44 preset keys store up to 88 preset items.	
System	Stand alone	
Input/Output	RS232C (for PLU/Label editor)	
Item Memory	256KB Approx. 2000 PLUs (Avg. 30 char. per PLU) without total Approx. 1500 PLUs (Avg. 30 char. per PLU) with total	
Safety Regulations	UL, C-UL, CE, C-Tick	

CHAPTER 3
SETUP MODE

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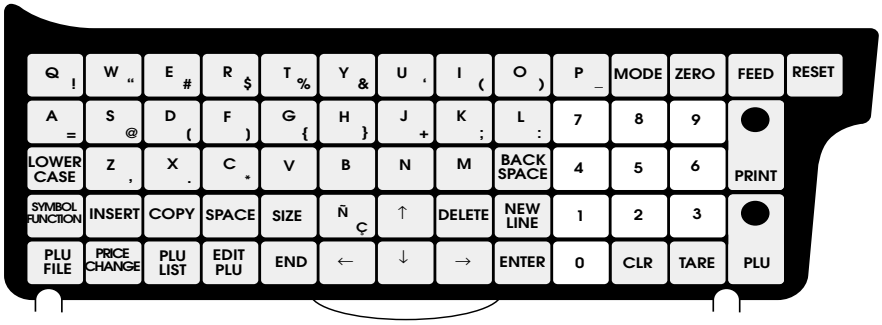
3.1 Setup Mode Entry

Setup Mode operations (b00) are required when initially setting up the basic functions of the Astra. When performing these operations, use the Program Key Sheet (located underneath the Operation Key Sheet) to set up the following items.

- **b01** : Label
- **b02** : POS Code
- **b03** : Bar Code
- **b04** : Default
- **b05** : Total
- **b06** : Forced Tare
- **b07** : Open Price



PROCEDURES

1 **Ensure that the Initial Display appears.**

2 **Key in the 4 digit password (default value: 6000) and press the MODE key. The Setup mode display will then appear.**

3.2 Label Print

PROCEDURES

Note: Refer to page 14, Section 3.1 to enter the Setup Mode.

1 Press the DOWN ARROW key (↓) until the Label menu (b01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly.

2 Press the ENTER key to enter the Label Print menu (b01-01).

3 Press the ENTER key to enter the Label Print Format menu.

- This menu is used to set the label print format number.
- Standard label format numbers are "1" to "5". Formats 6, 7, and 8 are available in some versions.
- When no label format number is set, label format "1" is set as the default number.
- Additional label format numbers "20" to "99" may be available.

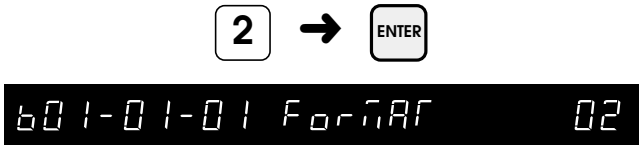
The Standard formats are:

1 – 60mm × 44mm
2 – 64mm × 47mm
3 – 64mm × 85mm Safe Handling
4 – 64mm × 59mm Safe Handling
5 – 64mm × 37mm Non-barcode
6* – 64mm × 59mm Extended Text
7* – 64mm × 85mm Extended Text
8* – 64mm × 85mm Reduced S.H.

**Not available in all versions*

4 Key in the required label print format number and press the ENTER key.

Example: Set label print format as "2"



5 Press the ENTER key to set the label length.

6 Key in the required label length and label gap (XX.X mm), and then press the ENTER key.

- 85mm is the maximum label size.
- Measure this distance from the top of one label to the top of the next label.
- Butt-cut labels may not be used in the Astra.
- Continous strip labels may not be used in the Astra.

Example: Set the label length to 45.5 mm.

7 Key in the required label width (XX.X mm) and press the ENTER key.

•If the label width is 60mm or larger, use the default value of "0.0".

Note: *This setting is used by the Astra for word wrapping when new PLU descriptions and Extra Messages are programmed.*

Example: Set the label width to 55.2 mm

5 5 2

ENTER

8 Key in the required distance (XX.X mm) between the label sensor and thermal print head and press the ENTER key.

Use this step to adjust print position on the label.

• Increasing this value raises the printing on the label.

Example: Set the distance to 74.8 mm

7 4 8

ENTER

9 Key in the PLU number for test printing and press the ENTER key.

Example: PLU "1"

1 ➜ ENTER

10 Press the PRINT key for test print to confirm the label format.

If necessary, return to Step b01-01-04 to adjust print position.

PRINT

11 Press the END key to return to the Label menu (b01).

END

12 Press the MODE key to return to the Normal Operation mode after all SETUP mode procedures are completed.

MODE

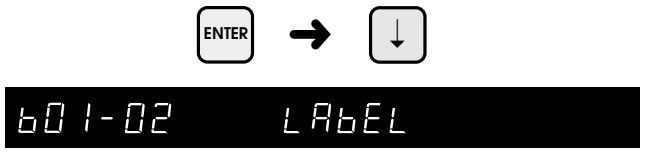
3.3 Label Format

PROCEDURES

Note: Refer to page 14, Section 3.1 to enter the Setup Mode.

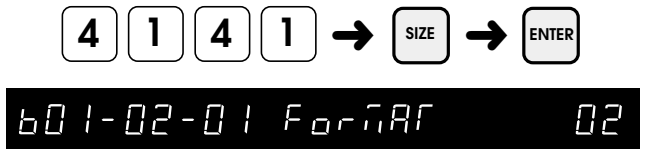
1 Press the DOWN ARROW key (↓) until the Label menu (b01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly.

2 Press the ENTER key and then the DOWN ARROW key (↓) to enter the Label Format menu (b01-02).



3 Enter the password and press the ENTER key to edit the label format.

Note: *To prevent accidental changes to the label format, this step is protected by an additional password.*

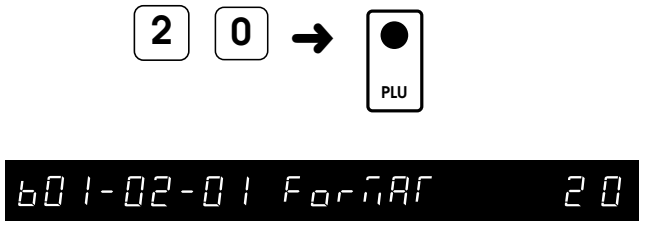


The password is "4141" followed by the **SIZE** key.

4 Key in the label format number to be set and press the PLU key.

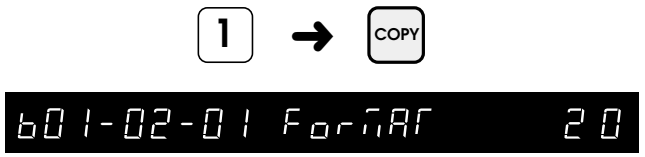
- Additional formats from "20" to "99" are programmable.
  (Number of label formats to be programmed depends on the amount of available memory.)

Example: Set label format as "20"



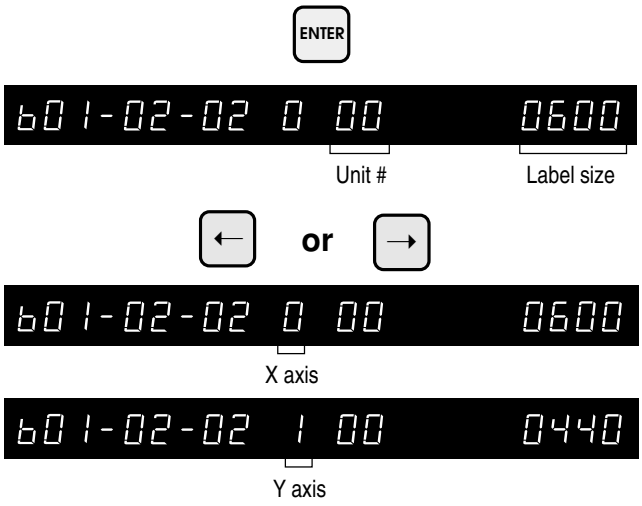
5 Key in the desired format number (standard label format number, 1 to 5) and press the COPY key.

- Formats 6, 7, and 8 are available in some versions.



6 Press the DOWN ARROW key (↓) to set the print position of each print unit.

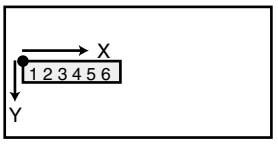
7 **Press the ENTER key, and select X axis (0) or Y axis (1) using either the RIGHT ARROW key (←) or the LEFT ARROW key (→).**



- The numeric value set in unit #0 indicates the label size. The label size cannot be changed. The printing positions can be changed within this area.

Print position change for each unit

- Setting can be done in units of 0.1mm. **Example:** For 20.0mm, key in 200.
- Set the printing position for X-axis (horizontal), and Y-axis (vertical)

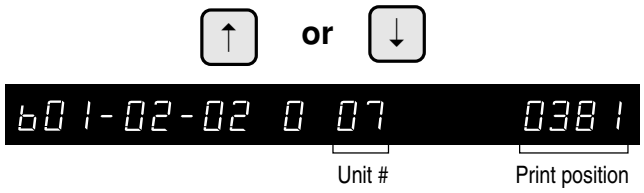


- To disable the unit, key in 9999 into X-axis. To enable the unit, key in the previous data.

Note: *1) Only store name and store address can be printed in the lower 7.5mm of the label.*

2) See Appendix A.2 for worksheets of default formats 1-8. Note that fromats 6, 7, and 8 are not available in all versions.

8 **Press the UP ARROW key (↑) or the DOWN ARROW key (↓) to select the unit number.**



9 **Key in the required print position data (Unit: 0.1 mm) and press the ENTER key.**

Example: Print position data "40.5 mm"

Note: *Print position data of default label formats (Format No. 1 to 19) cannot be changed.*

10 **Press the END key to return to the Format menu.**

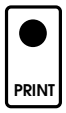
11 **Press the DOWN ARROW key (↓) until the Item menu appears.**

12 **Key in the required PLU number for test printing and press the ENTER key.**

Example: PLU "1"

13 **Press the PRINT key to confirm the label format.**

- Return to step b01-02-02 to make additional changes to the label format.



14 **Press the END key twice to return to the LABEL menu (b01).**

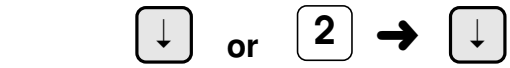
15 **Press the MODE key to return to Normal Operation mode after all SETUP mode procedures are completed.**

3.4 POS Code

PROCEDURES

Note: Refer to page 14, Section 3.1 to enter the Setup Mode.

1 Press the DOWN ARROW key (↓) until the POS Code menu (b02) appears or key in "2" followed by the DOWN ARROW key (↓) to enter the menu directly.



2 Press the ENTER key to enter the Flag menu (b02-01).

3 Key in the Flag Number (2 digits) and press the ENTER key.

Note: *In case a 3 digit or 4 digit code is keyed in by mistake, the last 2 digits are programmed as the flag code.*

• Default value is 2

Example: POS code flag "5"

4 Press the DOWN ARROW key (↓) to enter the Type menu.

5 Key in the POS Code Type (1 to 15) and press the ENTER key.

■ POS Code Type

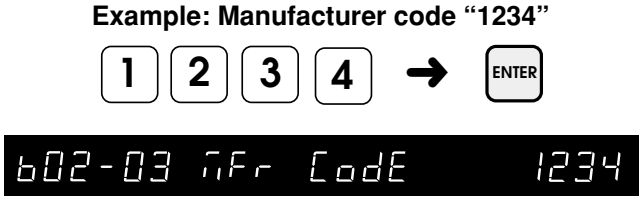
1 : FFCCCCC(C/P)PPPP(C/D) (default)
2 : FFCCCCCCPPPP(C/D)
3 : FCCCCCC(C/P)PPPP(C/D)
4 : FFCCCCCPPPPP(C/D)
5 : FCCCCCCPPPPP(C/D)
6 : FFCCCC(C/P)PPPPP(C/D)
7 : FFCCCCCCWWWW(C/D)
8 : FCCCCCCWWWWW(C/D)
9 : FCCCCCIIIIII(C/D)
10 : FFCCCCCCPPPP(C/D) – EAN Code
11 : FFCCCCCCWWWW(C/D) – EAN Code
12 : FFCCCC(C/P)WWWWW(C/D)
13 : FFMMMCCPPPPP(C/D)
14 : FFMMCCCPPPPP(C/D)
15 : FFCCCCC(0)PPPP(C/D)

Example: POS Code Type "3"

Note: *F = Flag*
C = Item code
P = Price
W = Weight
I = PLU no.
M = Manufacturer code
(C/P) = Check price
(C/D) = Check digit
(0) = Fixed zero

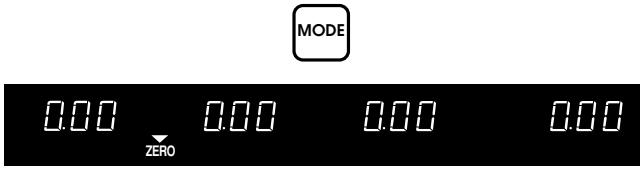
6 **Press the DOWN ARROW key (↓) to enter the Manufacturer Code menu.**

7 **Key in the required Manufacturer Code (Max. 4 digits) and press the ENTER key.**



8 **Press the END key to return to the LABEL menu (b01).**

9 **Press the MODE key to return to Normal Operation mode after all SETUP mode procedures are completed.**

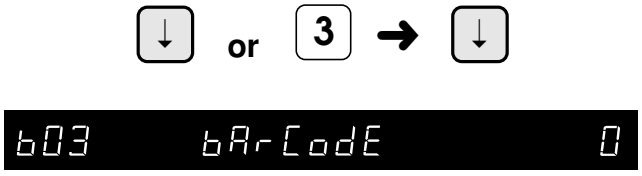


3.5 Bar Code

PROCEDURES

Note: Refer to page 14, Section 3.1 to enter the Setup Mode.

1 **Press the DOWN ARROW key (↓) until the Bar Code menu (b03) appears or key in "3" followed by the DOWN ARROW key (↓) to enter the menu directly.**



2 **Press the ENTER key to enter the Position setup (b03-01).**

3 **Key in the start position and number of digits of the PLU Code, and press the ENTER key.**

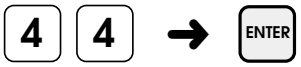
Note: *Default value "36" indicates 6 digits from 3rd digit of the barcode (step P01-09).*

Example : 12345678

DO NOT change the default value unless directed to do so by Ishida factory representatives. Changing this value will affect barcode scanning.

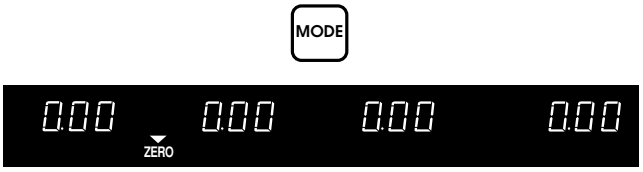
Note: *Later versions of Astra use the **COPY** key in place of ENTER for added security.*

Example: PLU number "44"



4 **Press the END key to return to the LABEL menu (b01).**

5 **Press the MODE key to return to Normal Operation mode after all SETUP mode procedures are completed.**



3.6 Default Setup

PROCEDURES

Note: Refer to page 14, Section 3.1 to enter the Setup Mode.

1 **Press the DOWN ARROW key (↓) until the Default menu (b04) appears or key in "4" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the Date Flag menu (b04-01).**

Note: *This step sets the default value of the date print flag.*

3 **Key in the Date Flag Number (1 to 4) and press the ENTER key.**

1 : Do not print pack date or expire date
2 : Print pack date only
3 : Print expire date only
4 : Print both pack date and expire date (default)

Note: *This setting may be overridden during PLU programming.*

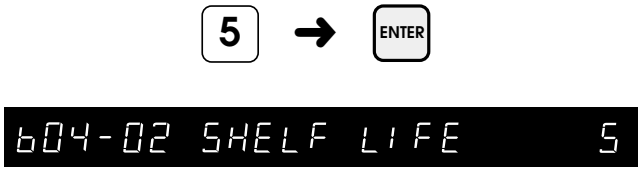
Example: Date Flag number "3"

4 **Press the DOWN ARROW key (↓) to enter the Shelf Life menu.**

5 **Key in the number of days for expire date (Max. 3 digits) as the default data and press the ENTER key.**

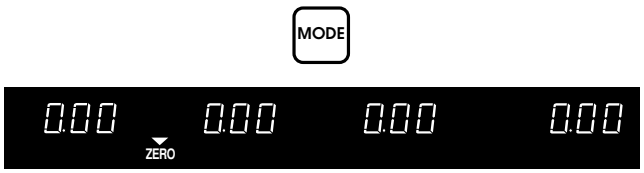
Note: *1. This step is required only when "3" or "4" is selected in Step 3 above.*
2. This setting may be overridden during PLU programming.

Example: Number of days "5"



6 **Press the END key to return to the LABEL menu (b01).**

7 **Press the MODE key to return to Normal Operation mode after all SETUP mode procedures are completed.**



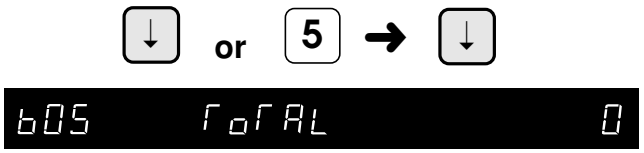
3.7 Total

Select whether production totals are accumulated.

PROCEDURES

Note: Refer to page 14, Section 3.1 to enter the Setup Mode.

1 **Press the DOWN ARROW key (↓) until the Total menu (b05) appears or key in "5" followed by the DOWN ARROW key (↓) to enter the menu directly.**



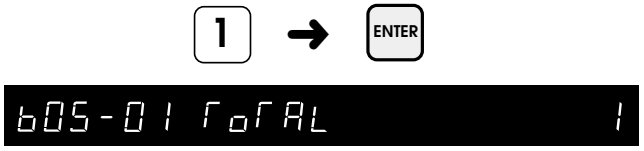
2 **Press the ENTER key to enter the Total Selection menu (b05-01).**

Note: *This menu selects whether or not the transaction data is added to total data.*

3 **Key in "0" or "1" and press the ENTER key.**

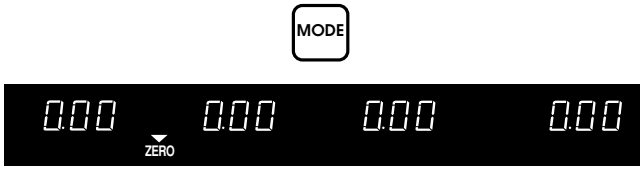
0 : Not added (default)
1 : Added

Example: Select "1"



4 **Press the END key to return to the LABEL menu (b01).**

5 **Press the MODE key to return to Normal Operation mode after all SETUP mode procedures are completed.**



3.8 Forced Tare

If Forced Tare is active,labels can be issued only if a tare weight is entered.

PROCEDURES

Note: Refer to page 14, Section 3.1 to enter the Setup Mode.

1 Press the DOWN ARROW key (↓) until the Forced Tare menu (b06) appears or key in "6" followed by the DOWN ARROW key (↓) to enter the menu directly.

2 Press the ENTER key to enter the Forced Tare Selection menu (b06-01).

Note : *This menu selects whether or not the forced tare function is active.*

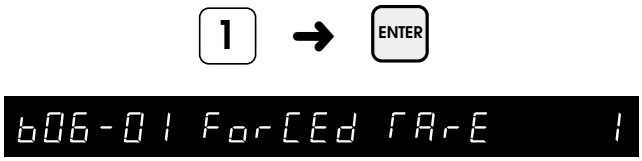
3 Key in "0" or "1" and press the ENTER key.

0 : Forced Tare is not active (default)

1 : Forced Tare is active

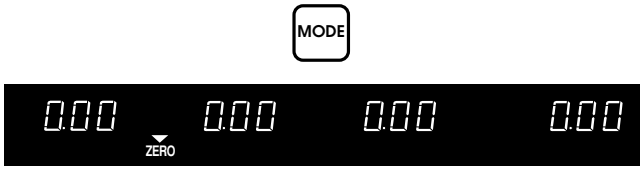
Note: *If Forced Tare is active a tare weight must be entered before a label can be printed. If no tare weight is entered, the message "ENTER TARE" is displayed and an error buzzer sounds when the PRINT key is pressed.*

Example: Select forced tare activation



4 Press the END key to return to the LABEL menu (b01).

5 Press the MODE key to return to Normal Operation mode after all SETUP mode procedures are completed.



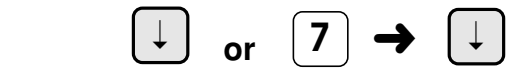
3.9 Open Price Setup

Select if the operator can make temporary price changes.

PROCEDURES

Note: Refer to page 14, Section 3.1 to enter the Setup Mode.

1 Press the DOWN ARROW key (↓) until the Open Price menu (b07) appears or key in "7" followed by the DOWN ARROW key (↓) to enter the menu directly.



2 Press the ENTER key to enter the Open Price Selection menu (b07-01).

Note: *This step is used to select if the operator can make temporary price changes.*

3 Key in "0" or "1" and press the ENTER key.

0 : Open price (default)
1 : Prohibition of temporary price changes

Example: Select "1"

4 Press the END key to return to the LABEL menu (b01).

5 Press the MODE key to return to Normal Operation mode after all SETUP mode procedures are completed.

CHAPTER 4
TEST MODE

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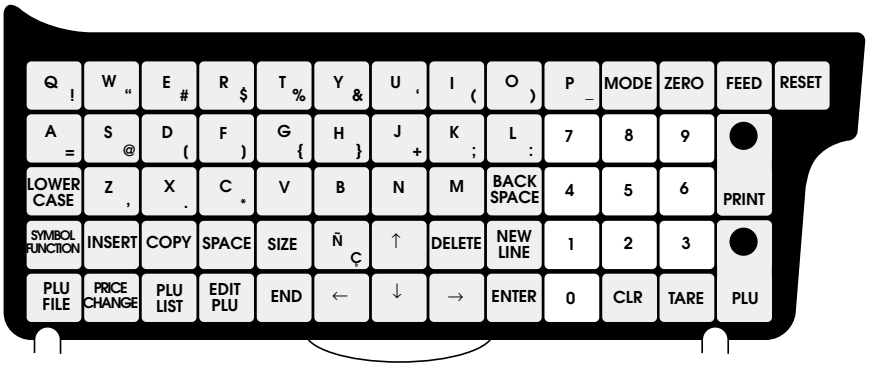
4.1 Test Mode Entry

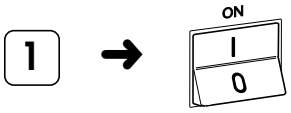
Test Mode operations (C00) are required when initially setting up the basic functions of the Astra and when checking hardware operations. When performing these operations, use the Program Key Sheet (located underneath the Operation Key Sheet) to set up and check the following items.

- **C01** : Hardware Test
- **C02** : RAM Clear
- **C03** : Print Head
- **C04** : Sensor Check
- **C05** : Total Memory
- **C06** : ROM Switch


Q ! W " E # R $ T % Y & U ' I (O) P _ MODE ZERO FEED RESET
A = S @ D (F) G { H } J + K ; L : 7 8 9
LOWER CASE Z , X . C * V B N M BACK SPACE 4 5 6 PRINT
SYMBOL FUNCTION INSERT COPY SPACE SIZE Ñ Ç ↑ DELETE NEW LINE 1 2 3
PLU FILE PRICE CHANGE PLU LIST EDIT PLU END ← ↓ → ENTER 0 CLR TARE PLU

PROCEDURES

1 **Turn the power switch ON while holding down the "1" key. Release the "1" key after the second beep.**



4.2 Hardware Test

4.2.1 A/D Calibration

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

1 **Press the DOWN ARROW key (↓) until the Hard Test menu (C01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly.**

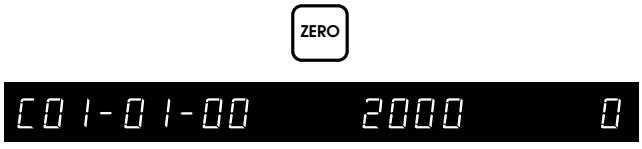
2 **Press the ENTER key to enter the A/D Data menu (C01-01).**

3 **Press the ENTER key to enter the A/D Data calibration adjustment menu.**

Note: *The values on the right half of the display are for example purposes only.*

4 **With no weight on the platter, press the ZERO key to initialize the A/D values.**

Note: *The initial value should be 2000 ±1 count. If the initial value is out of range, press the **ZERO** key again.*



5 **Place 30 lbs on the platter.**

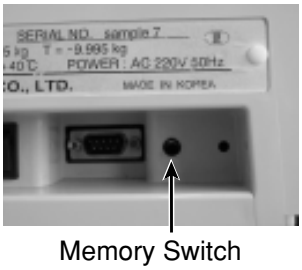
Note: *If ASTRA is set as 15 × 0.005kg use 15kg as the calibration weight.*

6 **If the calibration value is not 30000 ±2 counts, press the TARE key.**

Note: *If the TARE key was pressed, repeat the procedure from Step 4.*

7 **The calibration data must be saved to non-volitale memory. Press the Memory Switch located behind the nylon screw next to the 9-pin serial connector.**

Note: *Use the sealing kit supplied with the ASTRA to seal the scale as required by local regulations.*

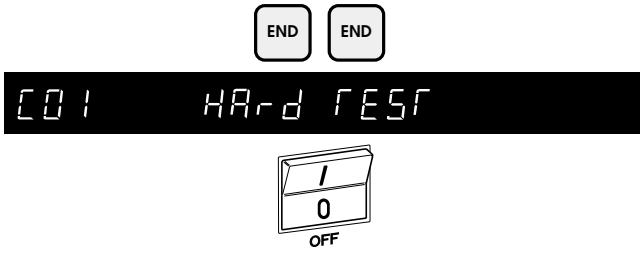


Memory Switch

8 **Press the END key two times to return to the Hardware Test menu (C01).**

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.

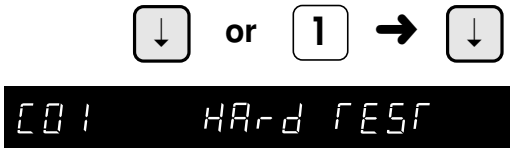


4.2.2 Key Check

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

1 **Press the DOWN ARROW key (↓) until the Hard Test menu (C01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly.**



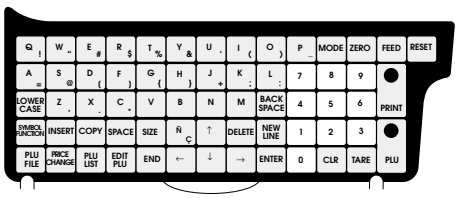
2 **Press the ENTER key to enter the A/D Data menu (C01-01).**

3 **Press the DOWN ARROW key (↓) until the Key Check menu (C01-02) appears.**

4 **Press the ENTER key to enter the Key Check menu.**

5 **Press any key to display its data value. A short beep should be heard for each key.**

The numeric value of each key is shown on the right side of the display.



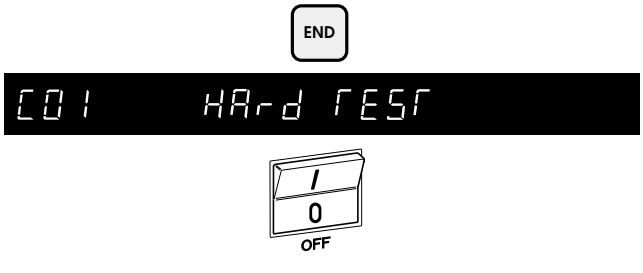
1	2	• • • • • • • • • • • • • • • • •	12	13	RESET
15	10	• • • • • • • • • • • • • • • • •	26	27	
28	29	• • • • • • • • • • • • • • • • •	39	27	
40	41	• • • • • • • • • • • • • • • • •	51	52	
53	54	• • • • • • • • • • • • • • • • •	64	52	

6 **Press the RESET key to exit the Key Check mode.**

7 **Press the END key to return to the Hardware Test menu (C01).**

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.



4.2.3 Display Check

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

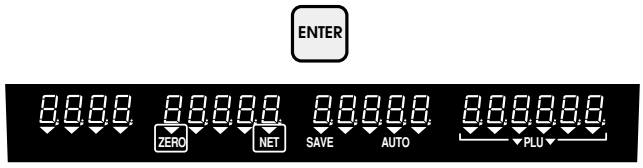
1 **Press the DOWN ARROW key (↓) until the Hard Test menu (C01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the A/D Data menu (C01-01).**

3 **Press the DOWN ARROW key (↓) until the Display Check menu (C01-03) appears.**

4 **Press the ENTER key to begin the display check.**

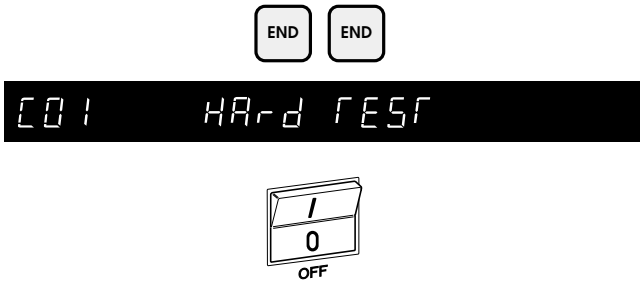
Confirm that the operator and customer displays are functioning properly.



5 **Press the END key two times to return to the Hardware Test menu (C01).**

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.



4.2.4 RS-232C Check

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

1 **Press the DOWN ARROW key (↓) until the Hard Test menu (C01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the A/D Data menu (C01-01).**

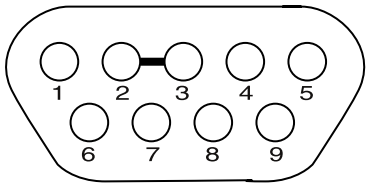
3 **Press the DOWN ARROW key (↓) until the RS-232C Check menu (C01-04) appears.**

4 **Press the ENTER key to enter the RS-232C Driver/Receiver check mode**.

5 **This step is used to verify if the internal circuitry for serial communications is functioning properly.**

Short-circuit pin 2 (TxD) and pin 3 (RxD) on the D-sub 9-pin connector then press the PRINT key.

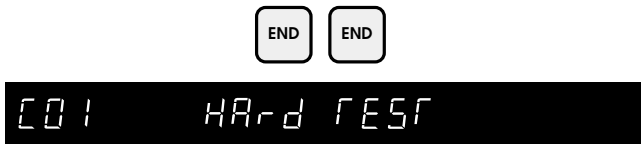
- When data verification is successful, a long tone sounds and "PASS" is displayed.
- When data verification is unsuccessful, an error tone sounds and "ERROR" is displayed.



6 **Press the END key two times to return to the Hardware Test menu (C01).**

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.



4.2.5 PROM Number Check

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

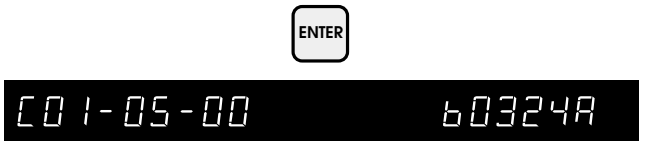
1 **Press the DOWN ARROW key (↓) until the Hard Test menu (C01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the A/D Data menu (C01-01).**

3 **Press the DOWN ARROW key (↓) until the PROM Number Check menu (C01-05) appears.**

4 **Press the ENTER key to enter the PROM Number check mode**.

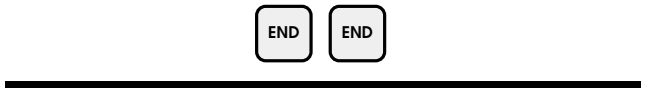
- This step is used to display the PROM version number.



5 **Press the END key two times to return to the Hardware Test menu (C01).**

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.



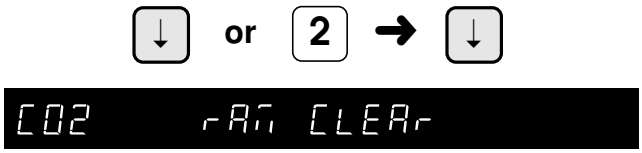
4.3 RAM Clear

This step is used to itialize the Astra's memory before installation or reset the memory after a problem.

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

1 Press the DOWN ARROW key (↓) until the RAM Clear menu (C02) appears or key in "2" followed by the DOWN ARROW key (↓) to enter the menu directly.

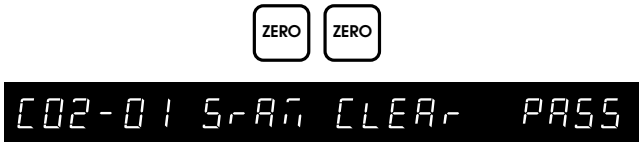


2 Press the ENTER key to enter the RAM Clear menu (C02-01).

3 Press the ZERO key twice to clear all RAM data.

- This procedure clears all data entered in the Programming Mode (9000) as well as any custom label formats.

Note: *If SRAM clear is unsuccessful, an error tone sounds and "ERROR" is displayed.*



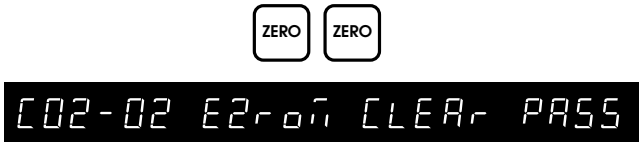
4 Press the DOWN ARROW key (↓) to enter the E2ROM Clear step.

5 Press the ZERO key twice to reset all E2ROM data to the default settings.

- This procedure clears all configuration changes programmed in the Test Mode and Setup Mode (6000).

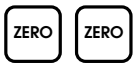
IMPORTANT: This procedure must be performed when the EPROM firmware chip is upgraded.

Note: *If E2ROM Clear is unsuccessful, an error tone sounds and "ERROR" is displayed.*



6 Press the DOWN ARROW key (↓) to enter the Test Data step.

7 Press the ZERO key twice to create a set of test data.



- This procedure creates the following test data:
  - PLUs 1 to 13*
  - Extra Messages 1 to 20*
  - Store Name and Address

IMPORTANT: This procedure clears all programmed data (Registration Mode) and resets some configuration settings (Setup Mode and Test Mode).

Note: *If Test Data Set is unsuccessful, an error tone sounds and "ERROR" is displayed. *Later versions of Astra create test sets 1 to 10.*

8 Press the END key to return to the Hardware Test menu (C01).

Turn the power OFF to exit the Test Mode.

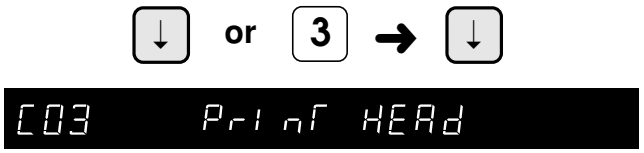
IMPORTANT: Do not use the RESET key to exit from Test Mode.

4.4 Print Head

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

1 Press the DOWN ARROW key (↓) until the Print Head menu (C03) appears or key in "3" followed by the DOWN ARROW key (↓) to enter the menu directly.



2 Press the ENTER key to enter the Print Head menu (C03-01).

3 Enter the resistance value according to the decal on the print head.

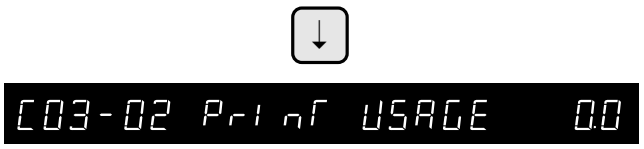
Press the PRINT key to issue a label with a test pattern.

- The resistance value of the print head can be set automatically by pressing the **COPY** key.

IMPORTANT: The resistance value must be re-entered when the print head is replaced.

Example: Set the resistance to 623 ohms.

4 Press the DOWN ARROW key (↓) to enter the Print Usage step.



5 The Print Usage step records the amount of label stock that has been printed by the ASTRA.

- Usage is displayed in increments of 100m (0.1km).
- Reset the usage amount when the print head is replaced.

  ▮ A password protects resetting the usage amount. Enter the password "4141" followed by the **SIZE** key. Enter "0" followed by the **ENTER** key to reset the usage amount.

6 Press the DOWN ARROW key (↓) to enter the Print Value step.

7 The Print Value step is used to set the darkness of the thermal printing.

- Entry values range from 1 (light) to 9 (dark).

Press the PRINT key to confirm the print darkness.

8 Press the END key to return to the Hardware Test menu (C01).

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.

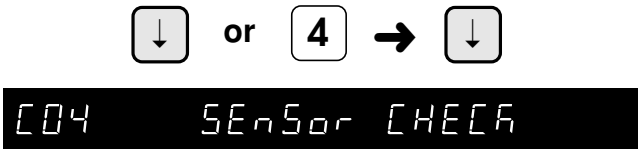
4.5 Sensor Check

Use the steps below to check and/or calibrate the label sensor.

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

1 Press the DOWN ARROW key (↓) until the Sensor Check menu (C04) appears or key in "4" followed by the DOWN ARROW key (↓) to enter the menu directly.



2 Press the ENTER key to enter the Sensor Check menu (C04-00).

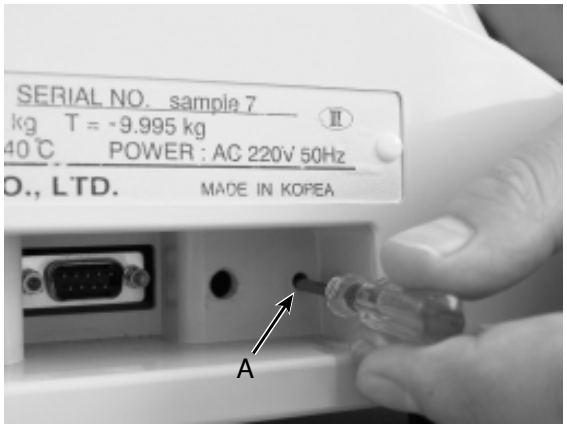
- This step is used to calibrate the label sensor.

3 Follow the steps below to calibrate the label sensor.

1. Place label backing paper only under the sensor.
2. Adjust value to 150 ±10.
3. Place label on backing paper under the sensor.
4. Confirm that the value is 60 or less.

Label backing paper only	150 ±10
Label and backing paper	≤ 60

Note: *1. Use a screwdriver to adjust the label sensor sensitivity.*
2. Use a #0 cross-head screwdriver with at least a 2.5" (64mm) shaft.
3. "A" indicates the potentiometer access hole.



4 Press the END key to return to the Hardware Test menu (C01).

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.

4.6 Total Memory

Use this step to view the amount of free memory available in the Astra.

PROCEDURES

Note: Refer to Section 4.1 to enter the Test Mode.

1 Press the DOWN ARROW key (↓) until the Total Memory menu (C05) appears or key in "5" followed by the DOWN ARROW key (↓) to enter the menu directly.

2 Press the ENTER key to enter the Total Memory menu (C05-00).

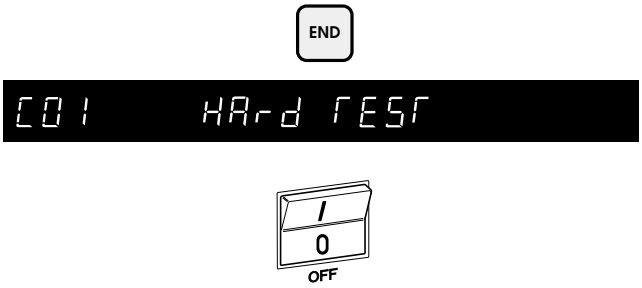
- The Total Memory and Remaining Memory amounts are displayed in KB.

If remaining memory is at or near zero, clear production total data and/or delete unused PLUs to regain memory.

3 Press the END key to return to the Hardware Test menu (C01).

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.



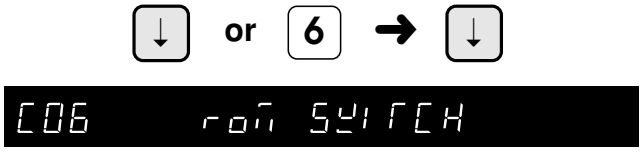
4.7 ROM Switch

ROM Switches are used to configure a variety of miscellaneous settings.

PROCEDURES

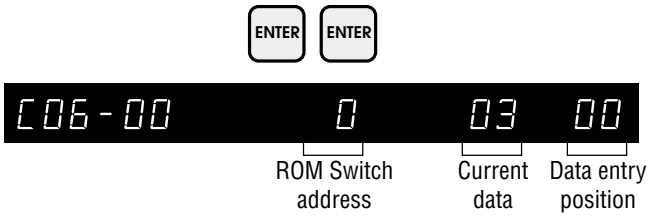
Note: Refer to Section 4.1 to enter the Test Mode.

1 Press the DOWN ARROW key (↓) until the ROM Switch menu (C06) appears or key in "6" followed by the DOWN ARROW key (↓) to enter the menu directly.



2 Press the ENTER key twice to enter the ROM Switch menu (C06-00).

- This step is used to set the ROM Switch data.



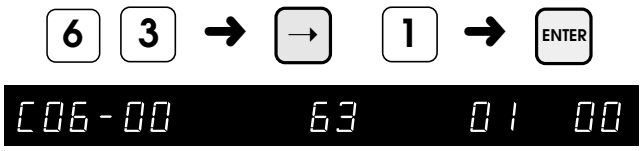
3 Procedure:

1. Key in the ROM Switch address and press the **RIGHT ARROW** (→) key.
2. Key in the new data and press the **ENTER** key.

- Refer to the ROM Switch table in the next step.

Note: *Use the **UP ARROW** or **RIGHT ARROW** keys to move to a higher numbered address.*
*Use the **DOWN ARROW** or **LEFT ARROW** keys to move to a lower numbered address.*

Example: Disable the RESET key.



4 ROM Switch List

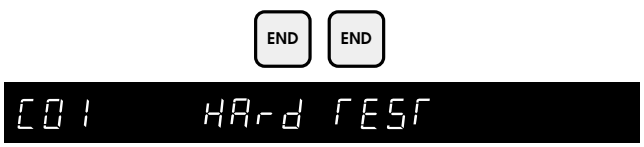
Address	Function	Data
0	Decimal Point Position, Weight (lb)	03 (Default)
1	Decimal Point Position, Total Price (lb)	03 (Default)
2	Decimal Point Position, Unit Price (lb)	03 (Default)
3	DC motor control	41 (Fixed)
4	Total Mode Accumulation of Piece Count for Fixed Price Items	00: Count number of labels printed 01: Count number of pieces on labels (Default)
5	Unit Pricing method	00: $/kg 01: $/100g and $/lb (Default)
6	Total Price rounding method	00: 4-5 round (Default) 01: 0/5 round
7	Date Printing selection for @/for Item (Fixed Price)	00: Both 01: Pack Date only 02: Expire Date only (Default) 03: No Date Print
8	Shelf Life Calculation Does Shelf Life include the pack day or begin counting from the next day?	00: Include pack day 01: Count from the next day (Default)
9	Field Title Print on Label	00: Do Not Print (Default) 01: Print
10	Weighing unit	00: lb (Default) 01: kg
11	Decimal Point Position, Weight (Kg)	04 (Default)
12	Decimal Point Position, Total Price (Kg)	03 (Default)
13	Decimal Point Position, Unit Price (Kg)	03 (Default)
14	Temporary date change selection ***Note:*** *In operation mode "0" entry disables date printing.*	00: Pack and Expire date — MMDDYY (Default) 01: Expire date only — MMDDYY 02: Expire date only — enter number of days
15*	Delete total data after upload to PC	00: Do Not Delete (Default) 01: Delete
63	RESET key operation	00: Enable (Default) 01: Disable

**Not available in all models*

5 Press the END key two times to return to the Hardware Test menu (C01).

Turn the power OFF to exit the Test Mode.

IMPORTANT: Do not use the RESET key to exit from Test Mode.



CHAPTER 5
REGISTRATION MODE

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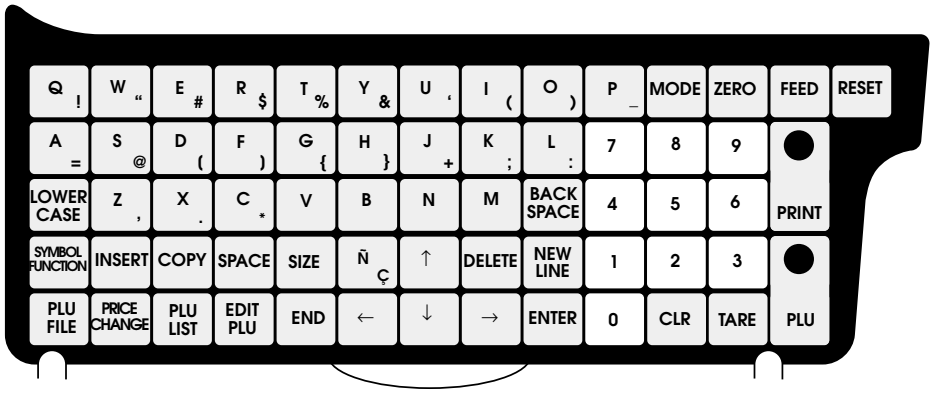
5.1 Registration Mode Entry

Registration Mode (P00) is used to program various preset functions required for normal operations to be performed. When performing these operations, use the Program Key Sheet (located underneath the Operation Key Sheet) to set up the following items.

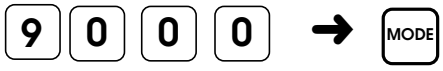
- **P01** : PLU programming
- **P02** : PLU name
- **P03** : Price change
- **P04** : Preset key
- **P05** : Shop name/Address
- **P06** : Date/Time
- **P07** : Extra message
- **P08** : Default PLU
- **P09** : PLU list
- **P10** : Communication
- **P11** : Nutrition


Q ! W " E # R $ T % Y & U ' I (O) P _ MODE ZERO FEED RESET
A = S @ D (F) G { H } J + K ; L : 7 8 9
LOWER CASE Z , X . C * V B N M BACK SPACE 4 5 6 PRINT
SYMBOL FUNCTION INSERT COPY SPACE SIZE Ñ Ç ↑ DELETE NEW LINE 1 2 3
PLU FILE PRICE CHANGE PLU LIST EDIT PLU END ← ↓ → ENTER 0 CLR TARE PLU

PROCEDURES

1 **Ensure that the Initial Display appears.**

2 **Key in the 4-digit password (default value: 9000) and press the MODE key. The Registration mode display will then appear.**

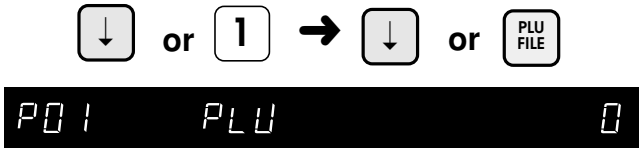


5.2 PLU Programming

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

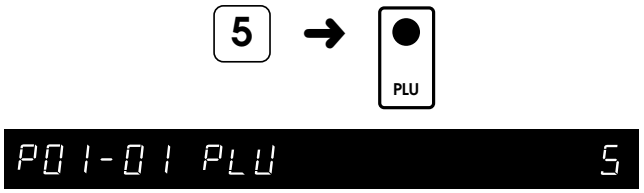
1 Press the DOWN ARROW key (↓) until the PLU menu (P01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly. Press the PLU FILE key to enter menu directly.



2 Press the ENTER key to enter the PLU Number step (P01-01) to register the data for each PLU.

3 Key in the PLU number (Max. 6 digits) and press the PLU key.

Example: PLU "5"



4 Press the EDIT PLU key to enter the PLU Name Edit Menu.

(Refer to Chapter 6 "Text Editing" for further details.)

5 Press the DOWN ARROW key (↓) or the ENTER key to enter the Scale menu.

6 Key in "0", "1" or "2" and press the ENTER key to set the Scale mode.

0 : Weighing price
1 : Fixed price
2 : Weighing/Fixed price

Note: *In case "0" or "2" is selected, steps 8. "P01-04 WEIGHT" and 9. "P01-05 PCS" are skipped.*

Note: *In case "1" is selected, steps 10. "P01-06 TARE" and 16. "P01-12 PROP TARE" are skipped.*

Example: Scale Mode "1"

7 **Key in the unit price or the fixed price (Max. 5 digits) and press the ENTER key.**

Example: Price "$2.15"

2 1 5

ENTER

8 **Key in the fixed weight (Max. 3 digits) and press the ENTER key.**

Note: *Fixed weight is available for fixed price items only.*

Note: *Enter fixed weight amount in ounces.*

Example: Fixed Weight "12 oz"

1 2

ENTER

9 **Key in the number of items (Max. 2 digits) and press the ENTER key.**

Note: *Number of items is available for fixed price items only.*

Example: "2 pcs"

2

ENTER

10 **Key in the Tare Weight (Max. 4 digits) and press the ENTER key.**

Note: *Applies only to weighing items or weighing/fixed price items.*

ENTER

11 **Key in the date print flag (0 to 4) and press the ENTER key to set the number of days for expiry.**

Date print flag

0 : Default data
1 : No print
2 : Pack date only
3 : Expire date only
4 : Both Pack date and Expire date

Note: *In case "0 : Default data" is selected, the date print flag set in step b04-01 Date Flag (setup mode) is used.*

Example: Expire date only "3"

ENTER

12 **Key in the number of days to expiration (Max. 3 digits) and press the ENTER key.**

Note: *"1000" is the code to designate the default data. If "1000" is set, the number of days for shelf life programmed as the default data in the step "B04-02 SHELF LIFE" of SETUP mode is set automatically.*

Example: Number of days to expiration "15"

1 5

ENTER

13 **Key in the barcode (Max. 8 digits) and press the ENTER key.**

Note: *When a new PLU is programmed, the barcode defaults to the PLU number.*

Example: Item code "88888"

ENTER

14 **Key in the extra message number (0 to 99) and press the ENTER key.**

Extra message number

0 : No designation

1 to 99 : Extra message number

- Extra message should be registered in P07 Extra Message Registration, Section 5.8

Example: Extra message number "3"

3

ENTER

15 **Key in the nutrition panel number (Max. 3 digits) and press the ENTER key.**

Nutrition Panel number

0 : No designation

1 to 999 : Nutrition Panel number

- Nutrition Panel should be registered in P11 Nutrition Panel Registration, Section 5.13

Example: Panel number "2"

2

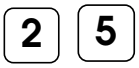
ENTER

16 **Key in the proportional tare percent amount (Max. 50.0) and press the ENTER key.**

Note: *Porportional tare is the weight of an item that is the packaging as measured by a percentage amount.*

Example: *The wrapper on a piece of candy is 2.5 percent of the total weight. By using portional tare, any amount of candy can be accurately weighed on the scale by subtracting the wrapper weight as a percentage of the total weight.*

Example: Percent tare "2.5"



17 **To program additional PLUs, repeat steps 3 through 16.**

18 **Press the END key to return to the PLU menu (P01).**

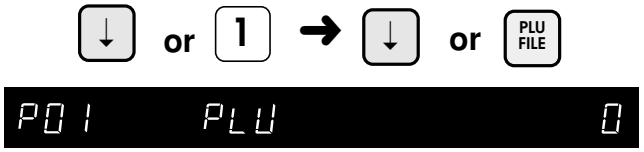
19 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**

5.2.1 Deleting a PLU

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

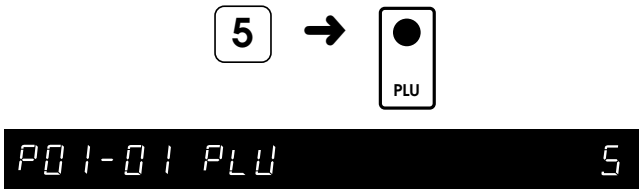
1 **Press the DOWN ARROW key (↓) until the PLU menu (P01) appears or key in "1" followed by the DOWN ARROW key (↓) to enter the menu directly. Press the PLU FILE key to enter menu directly.**



2 **Press the ENTER key to enter the PLU Number step (P01-01) to delete PLUs.**

3 **Key in the PLU number (Max. 6 digits) and press the PLU key.**

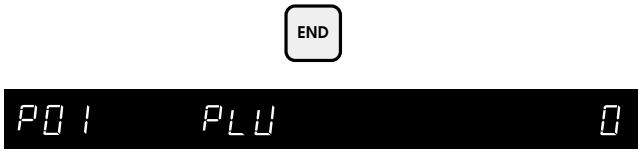
Example: PLU "5"



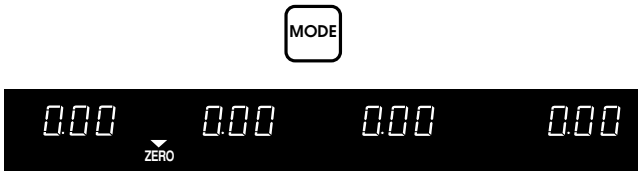
4 **Press the DELETE key twice to delete the PLU.**

Note: *The OK buzzer sounds when the PLU is deleted.*

5 **Press the END key to return to the PLU menu (P01).**



6 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**

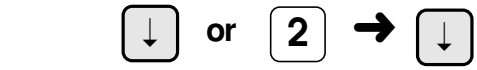


5.3 PLU Name

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

1 **Press the DOWN ARROW key (↓) until the PLU Name (P02) appears or key in "2" followed by the DOWN ARROW key (↓) to enter the menu directly.**



2 **Press the ENTER key to enter the PLU Number menu to select the PLU.**

3 **Key in the PLU number and press the PLU key.**

Example: "PLU 5"

4 **Press the ENTER key to enter the EDIT menu.**

Note: *Refer to chapter 6 "Text Editing" for further details.*

5 **Press the ENTER key after entering/ editing the PLU Name.**

6 **Press the END key to return to the PLU menu (P01).**

7 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**

5.4 Price Change

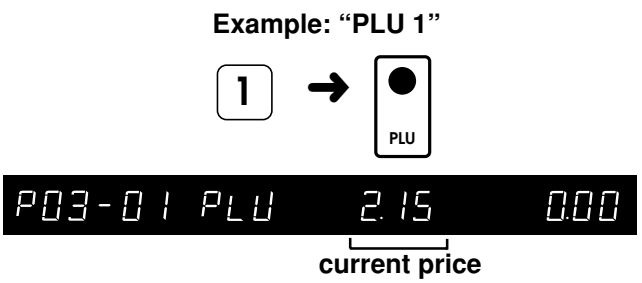
PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

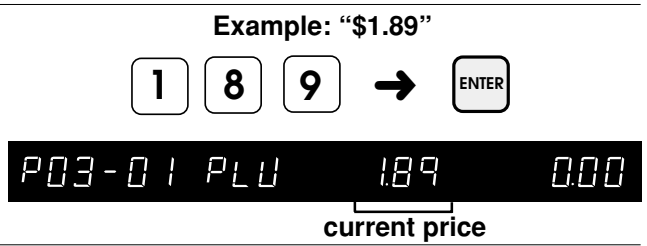
1 **Press the DOWN ARROW key (↓) until the PRICE menu (P03) appears or key in "3" followed by the DOWN ARROW key (↓) to enter the menu directly.**
Press PRICE CHANGE key to enter the menu directly.

2 **Press the ENTER key to enter the PLU Number menu.**

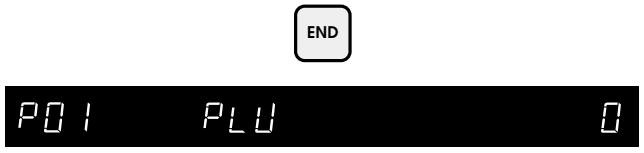
3 **Key in the PLU number and press the PLU key.**



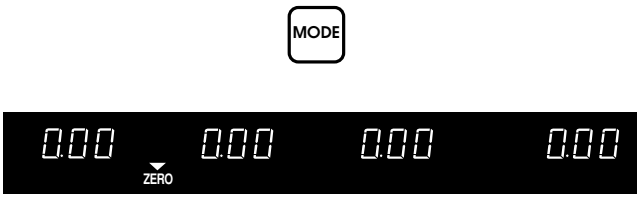
4 **Key in the unit price or the fixed price (Max. 5 digits) and press the ENTER key.**



5 **Press the END key to return to the PLU menu (P01).**



6 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**



5.5 Preset Key

5.5.1 Preset Keys — PLU and Tare values

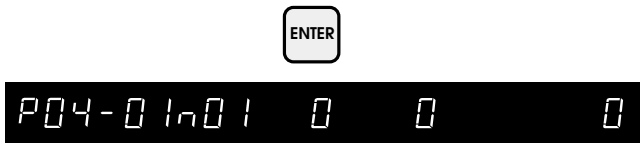
PROCEDURE

Note: Refer to Section 5.1 to enter the Registration mode.

1 **Press the DOWN ARROW key (↓) until the Preset Key menu (P04) appears or key in "4" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the Preset menu (P04-01).**

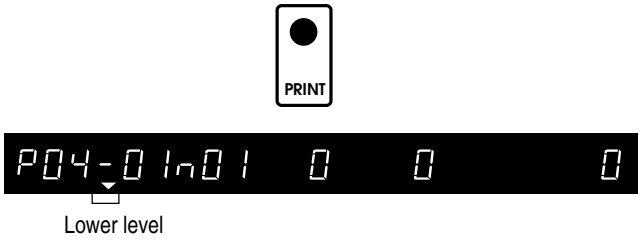
3 **Press the ENTER key to set the preset PLU or tare key data.**



4 **Press the PRINT key to switch between upper and lower preset keys.**

Note: *Two values can be stored on each preset key. The **PRINT** key is used to switch between upper and lower level. When lower level is selected, the lower level indicator will be lit.*

Example: Preset key (lower level) as "PLU 2"



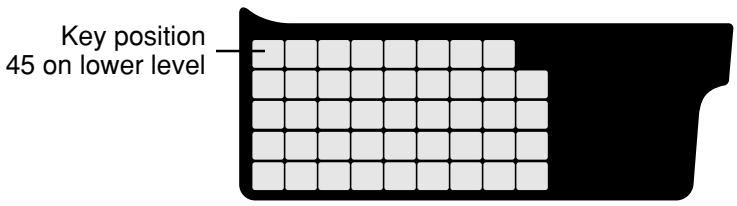
5 **Press the FEED key to switch between the PLU number (Key flag 1) and tare weight (Key flag 2) assignment.**

Preset key flag

1 : PLU (Max. 6 digits)

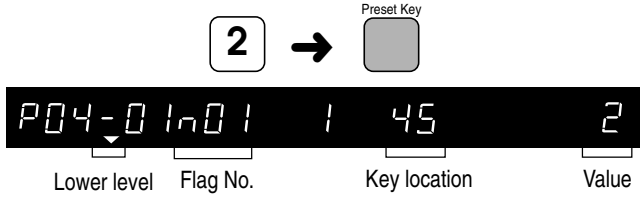
2 : Tare (Max. 4 digits)

Note: *The default Flag No. is "1".*

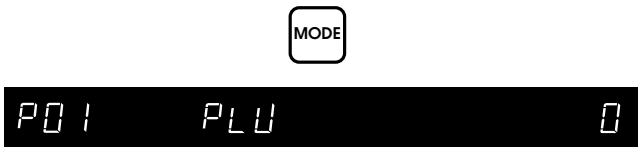


6 **Key in data (PLU number or Tare weight) and press the desired preset key.**

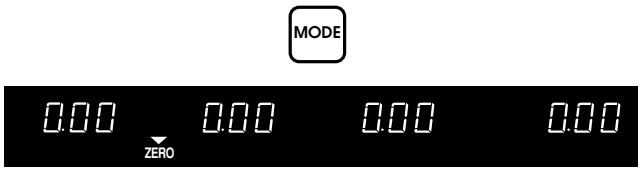
Repeat steps 4, 5 and 6 to assign more preset keys.



7 **Press the MODE key to return to the PLU menu (P01).**



8 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**



5.5.2 Preset Function Keys

Use this procedure to assign function keys to the keyboard.

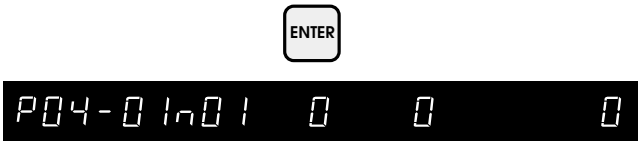
PROCEDURE

Note: Refer to Section 5.1 to enter the Registration mode.

1 **Press the DOWN ARROW key (↓) until the Preset Key menu (P04) appears or key in "4" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the Preset menu (P04-01).**

3 **Press the ENTER key to set the preset function keys.**



4 **Key in the desired preset key flag number (3 to 14), and press the FEED key, then press the "0" (ZERO) key to recognize the entry as a function key.**

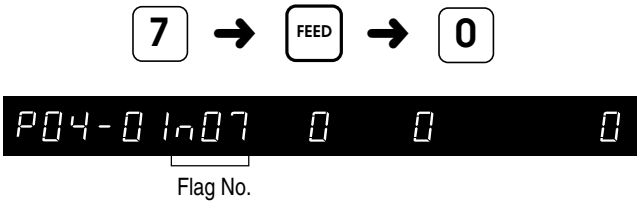
Note: *The default Flag No. is "1".*

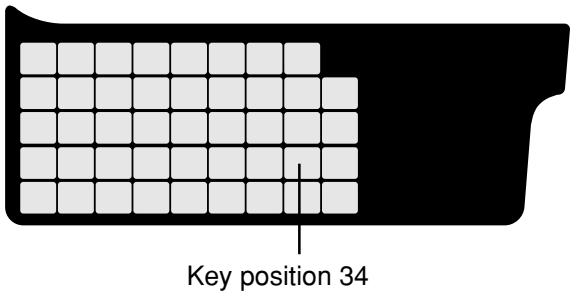
Preset function key flag

3 : Fixed price
4 : X (Multiply)
5 : Special price discount
6 : – $ price discount
7 : – % price discount
8 : Save
9 : Extra message
10 : VOID
11 : Peel timer
12 : "99"
13 : "00"
14 : % Tare

Note: *See Section 7.3 for an explaination of function keys.*

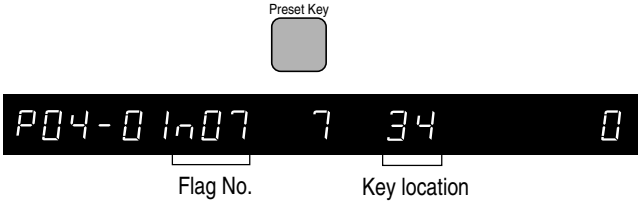
Example: Preset key as "–%"



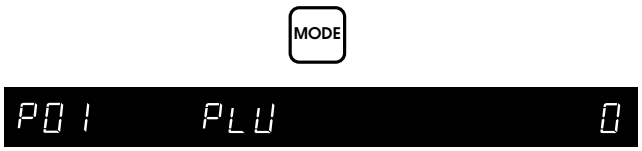


5 **Press the desired preset key.**

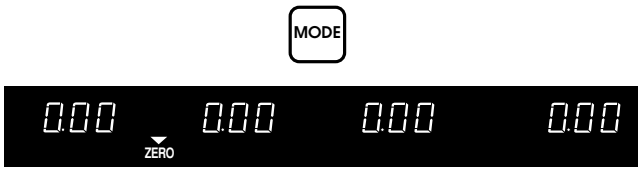
Repeat step 4 as needed to assign more function keys.



6 Press the MODE key to return to the PLU menu (P01).



7 Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.

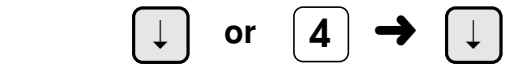


5.5.3 Deleting All Preset Keys

PROCEDURE

Note: Refer to Section 5.1 to enter the Registration mode.

1 **Press the DOWN ARROW key (↓) until the Preset Key menu (P04) appears or key in "4" followed by the DOWN ARROW key (↓) to enter the menu directly.**



2 **Press the ENTER key to enter the Preset menu (P04-01).**

3 **Press the DOWN ARROW key (↓) to enter the step to delete all preset key data.**

4 **Press the ENTER key and then press the ZERO key twice to delete all preset key data.**

Note: *The OK buzzer sounds to notify the operator that the deletion has been completed.*

5 **Press the END key to return to the PLU menu (P01).**

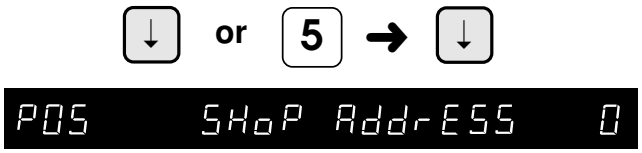
6 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**

5.6 Shop Name/Address

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

1 **Press the DOWN ARROW key (↓) until the Shop Address menu (P05) appears or key in "5" followed by the DOWN ARROW key (↓) to enter the menu directly.**



2 **Press the ENTER key to enter the Shop Name menu (P05-01) to register the shop name.**

3 **Press the ENTER key to enter the Shop Name edit menu to edit the text.**

Note: *Refer to Chapter 6 "Text Editing" for further details.*
Only character size "1" is available.
Maximum of 46 characters. Italic character font is not available.

4 **After text entry, press the ENTER key.**

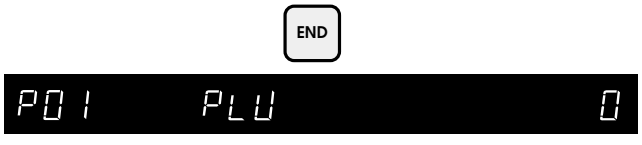
5 **Press the DOWN ARROW key (↓) to enter the Shop Address menu (P05-02) to register the shop address.**

6 **Press the ENTER key to enter the Address edit menu to edit the text.**

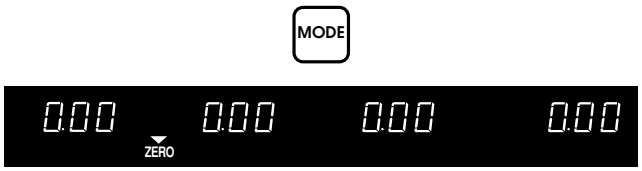
Note: *Refer to Chapter 6 "Text Editing" for further details.*
Only character size 1 is available.
Maximum of 46 characters. Italic character font is not available.

7 **After text entry, press the ENTER key.**

8 **Press the END key to return to the PLU menu (P01).**



9 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**



5.7 Date/Time

PROCEDURES

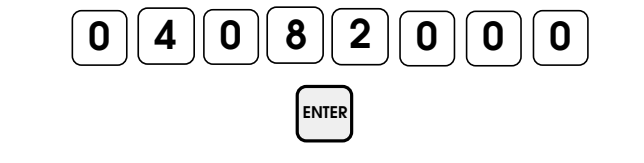
Note: Refer to Section 5.1 to enter the Registration mode.

1 **Press the DOWN ARROW key (↓) until the DATE/TIME menu (P06) appears or key in "6" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the Date menu (P06-01) to set the date.**

3 **Key in the date (8 digits: MMDDYYYY) and press the ENTER key.**

Example: "April 8, 2000"

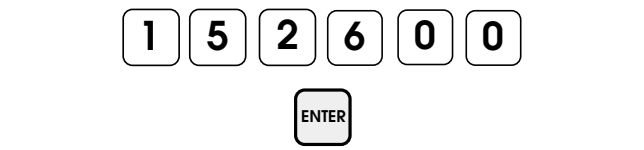


4 **Press the ENTER key to enter the Time menu (P06-02) to set the time.**

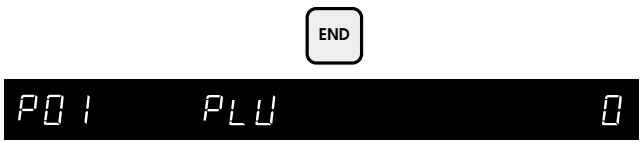
5 **Key in the time (6 digits: HHMMSS) and press the ENTER key.**

• Time is entered in 24-hour format.

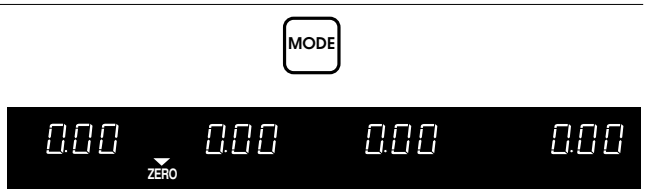
Example: "15:26:00" (3:26 pm)



6 **Press the END key to return to the PLU menu (P01).**



7 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**

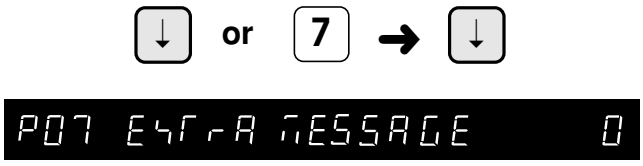


5.8 Extra Message

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

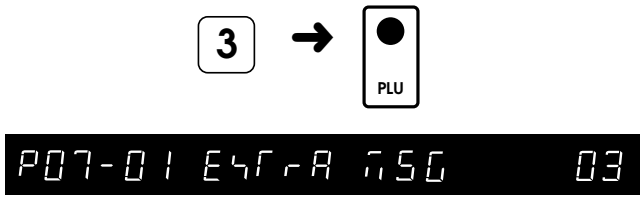
1 **Press the DOWN ARROW key (↓) until the Extra Message menu (P07) appears or key in "7" followed by the DOWN ARROW key (↓) to enter the menu directly.**



2 **Press the ENTER key to enter Message Number menu (P07-00) to register the extra message.**

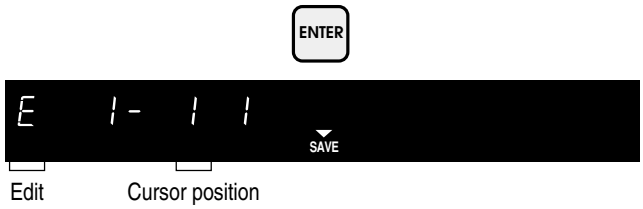
3 **Key in required message number (1 to 99) and press the PLU key.**

Example: Message No. "3"



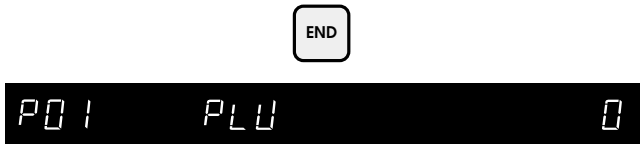
4 **Press the ENTER key to enter the Extra Message edit menu.**

Note: *Refer to Chapter 6 "Text Editing" for further details.*

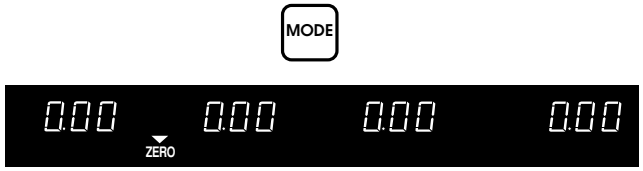


5 **After text entry, press the ENTER key.**

6 **Press the END key to return to the PLU menu (P01).**



7 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**



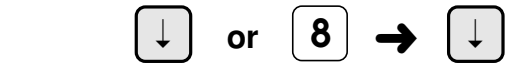
5.9 Default PLU

Use this step to assign a PLU as the Default PLU, see step 3 below for details of Default PLU operation.

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

1 Press the DOWN ARROW key (↓) until the DEFAULT PLU menu (P08) appears or key in "8" followed by the DOWN ARROW key (↓) to enter the menu directly.

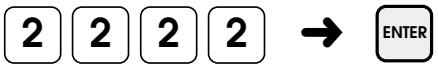


2 Press ENTER key to enter the default PLU Number menu (P08-00) to set the default PLU number.

3 Key in PLU number and press the ENTER key.

- After a transaction, the scale will return to the default PLU instead of clearing to no PLU.
- Use the default PLU to bypass entry of a PLU for each transaction.
- A different PLU may be recalled at any time to override the default PLU during normal operation.
- To disable the default PLU, enter "0" in step P08-00.

Example: PLU No. "2222"



4 Press the END key to return to the PLU menu (P01).

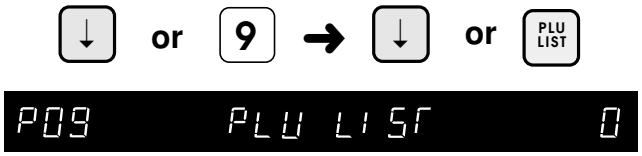
5 Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.

5.10 PLU List Print

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

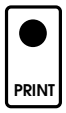
1 **Press the DOWN ARROW key (↓) until the PLU LIST menu (P09) appears or key in "9" followed by the DOWN ARROW key (↓) to enter the menu directly or press the PLU LIST key to enter the menu directly.**



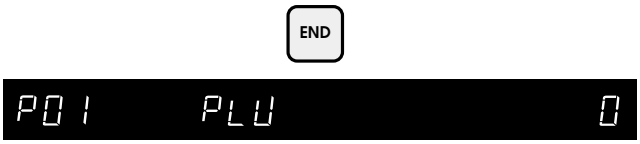
2 **Press the ENTER key to enter the PLU List menu (P09-01).**

3 **Press the PRINT key to print the Item List.**

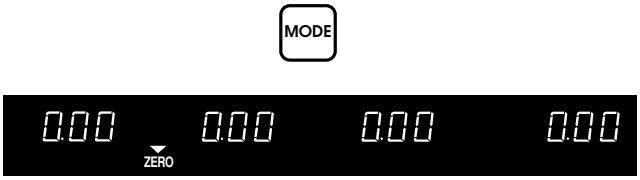
- Printing starts from the first PLU number.
- Starting PLU number can be designated by entering the PLU number and pressing the **PRINT** key.
- To stop printing before completion of the PLU List, press the **ZERO** key.
- If the PLU list contains many items, do not thread the paper onto the take up bobbin. Allow the labels to remain on the backing paper.



4 **Press the END key to return to the PLU menu (P01).**



5 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**



5.11 Communication (Sending)

Use this procedure to send data to a PC (Astra Link and Astra Label programs) or to another Astra scale.

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

1 **Press the DOWN ARROW key (↓) until the COMMUNICATION menu (P10) appears or key in "10" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the Send Data menu (P10-01).**

3 **Press the ENTER key to access the selection of sendable data.**

4 **Select the data to be sent by pressing the DOWN ARROW key (↓) or key in the desired number followed by the ENTER key to gain direct access.**

Example: Send item "03" (PLU file)

Uploadable data

P10-01-01 : ALL DATA
02 : SHOP NAME
03 : PLU FILE
04 : PRESETS (preset keyboard data)
05 : MESSAGES (Extra message data)
06 : LABEL FMT (Label format data)
07 : CNFG DATA (E2ROM data)
08 : NUTRITION
09 : TOTAL DATA (Production totals)*

Note: *After data is sent properly, "—— DATA SEND OK—— " is displayed temporarily.*
If data is not sent properly, "—— DATA SEND ERROR —— " is displayed and an error buzzer sounds.
**Not available in all versions.*

5 **Press the END key to return to the PLU menu (P01).**

6 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**

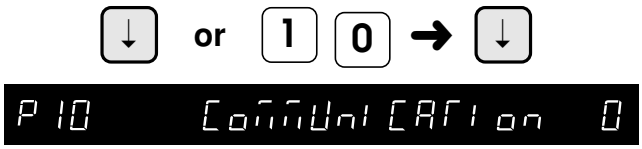
5.12 Communication (Receiving)

Use this procedure to receive data from a PC (Astra Link and Astra Label programs) or from another Astra scale.

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

1 Press the DOWN ARROW key (↓) until the COMMUNICATION menu (P10) appears or key in "10" followed by the DOWN ARROW key (↓) to enter the menu directly.



2 Press the ENTER key to enter the Send Data menu (P10-01).

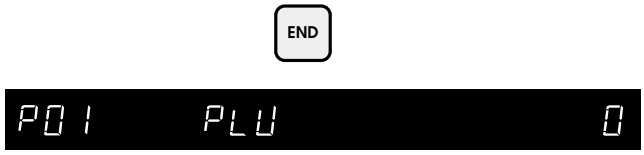
3 Press the DOWN ARROW key (↓) to access the receive data menu.

4 Press the ENTER key to begin receiving data.

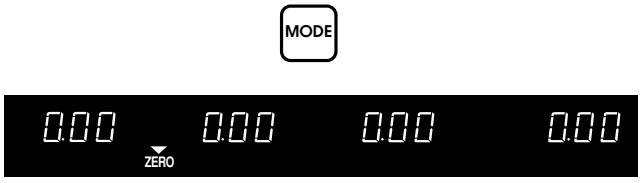
Note: *After data is received properly, "—— DATA RECEIVE OK—— " is displayed temporarily.*

If data is not received properly, "—— DATA RECEIVE ERROR —— " is displayed and an error buzzer sounds.

5 Press the END key to return to the PLU menu (P01).



6 Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.



5.13 Nutrition

PROCEDURES

Note: Refer to Section 5.1 to enter the Registration mode.

1 **Press the DOWN ARROW key (↓) until the NUTRITION menu (P11) appears or key in "11" followed by the DOWN ARROW key (↓) to enter the menu directly.**

2 **Press the ENTER key to enter the Nutrition Panel menu (P11-00), and enter the Nutrition Panel No.**

3 **Press the ENTER key and enter the serving size using alphanumeric characters (Max. 10 char.).**

4 **Press the ENTER key and enter the Servings per Container using alphanumeric characters (Max. 4 char.).**

5 **Press the ENTER key and enter the Total Calories (Max. 4 digits).**

6 **Press the ENTER key and enter the Fat Calories (Max. 4 digits).**

7 **Press the ENTER key and enter the Total Fat amount (Max.3 char.).**

8 **Press the ENTER key and select the unit of measure (0: "mg" or 1: "g").**

9 **Press the ENTER key and enter the Total Fat percentage (Max. 3 digits).**

ENTER

10 **Press the ENTER key and enter the Saturated Fat amount using alphanumeric characters (Max. 3 char.).**

ENTER

11 **Press the ENTER key and select the unit of measure (0: "mg" or 1: "g").**

ENTER

12 **Press the ENTER key and enter the Saturated Fat percentage (Max. 3 digits).**

ENTER

13 **Press the ENTER key and enter the Cholesterol amount (Max. 3 char.).**

ENTER

14 **Press the ENTER key and select the unit of measure (0: "mg" or 1: "g").**

ENTER

15 **Press the ENTER key and enter the Cholesterol percentage (Max. 3 digits).**

ENTER

16 **Press the ENTER key and enter the Sodium amount (Max. 4 char.).**

ENTER

17 **Press the ENTER key and select the unit of measure (0: "mg" or 1: "g").**

ENTER

18 **Press the ENTER key enter the Sodium percentage (Max. 3 digits).**

ENTER

19 **Press the ENTER key and enter the total Carbohydrate amount (Max. 4 char.).**

ENTER

20 **Press the ENTER key and select the unit of measure (0: "mg" or 1: "g").**

ENTER

21 **Press the ENTER key and enter the Carbohydrate percentage (Max. 3 digits).**

ENTER

22 **Press the ENTER key and enter the Dietary Fiber amount (Max. 3 char.).**

ENTER

23 **Press the ENTER key and select the unit of measure (0: "mg" or 1: "g").**

ENTER

24 **Press the ENTER key and enter the Dietary Fiber percentage (Max. 3 digits).**

ENTER

25 **Press the ENTER key enter the Protein amount (Max. 3 char.).**

ENTER

26 **Press the ENTER key and select the unit of measure (0: "mg" or 1: "g").**

ENTER

27 **Press the ENTER key and enter the Protein percentage (Max. 3 digits).**

ENTER

28 **Press the ENTER key and enter the Sugar amount (Max. 3 char.).**

ENTER

29 **Press the ENTER key and select the unit of measure (0: "mg" or 1: "g").**

ENTER

30 **Press the ENTER key and enter the Sugar percentage (Max. 3 digits).**

ENTER

31 **Press the ENTER key and enter the Vitamin A percentage (Max. 3 digits).**

ENTER

32 **Press the ENTER key and enter the Vitamin C percentage (Max. 3 digits).**

ENTER

33 **Press the ENTER key and enter the Calcium percentage (Max. 3 digits).**

ENTER

34 **Press the ENTER key and enter the Iron percentage (Max. 3 digits).**

ENTER

35 **Press the END key to return to the PLU menu (P01).**

END

36 **Press the MODE key to return to normal operation mode after all operations of Registration Mode are completed.**

MODE

CHAPTER 6
TEXT EDITING

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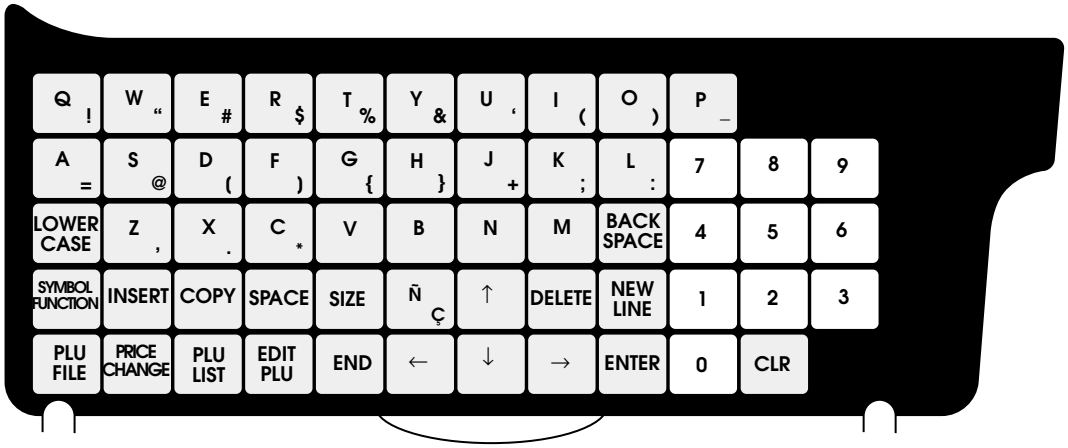
6.8 Character Size 74

6.1 Edit Keys

These keys are used while in the Text Editing mode.


Q ! W " E # R $ T % Y & U ' I (O) P _
A = S @ D (F) G { H } J + K ; L : 7 8 9
LOWER CASE Z , X . C * V B N M BACK SPACE 4 5 6
SYMBOL FUNCTION INSERT COPY SPACE SIZE Ñ Ç ↑ DELETE NEW LINE 1 2 3
PLU FILE PRICE CHANGE PLU LIST EDIT PLU END ← ↓ → ENTER 0 CLR

6.2 Key Definition

BACK SPACE
Used to delete a character in the text field by moving the cursor backwards.

NEW LINE
Used as a carriage return to make a new line.

DELETE
Used to delete a character in the text field where the cursor is placed on the display.

ENTER
Used to save character data and complete the EDIT mode.

UP ARROW
Used to move the cursor up one line.

DOWN ARROW
Used to move the cursor down one line.

RIGHT ARROW
Used to move the cursor right one character.

LEFT ARROW
Used to move the cursor left one character.

SIZE
Used to select different character sizes.
After pressing the **SIZE** key, use the **UP ARROW** and **DOWN ARROW** keys to scroll through the character sizes. To make fonts italic, press the **SIZE** key and then the **RIGHT ARROW** key.

Note: The character size of existing text cannot be changed.

END
Used to return to the normal operation mode.

EDIT PLU
Used to select the menu item for creating, editing or deleting PLU descriptions.

COPY
Used to copy character data.
Key in the source PLU number and press the **COPY** key to copy the character data from another PLU.

Note: Extra messages may also be copied.

PLU LIST
Used to select the menu item for printing a PLU file list. The file is printed on labels.

INSERT
Used to change between inserting or overwriting characters while editing text fields.
- Indicator ON: Insert (Default)
- Indicator OFF: Overwrite

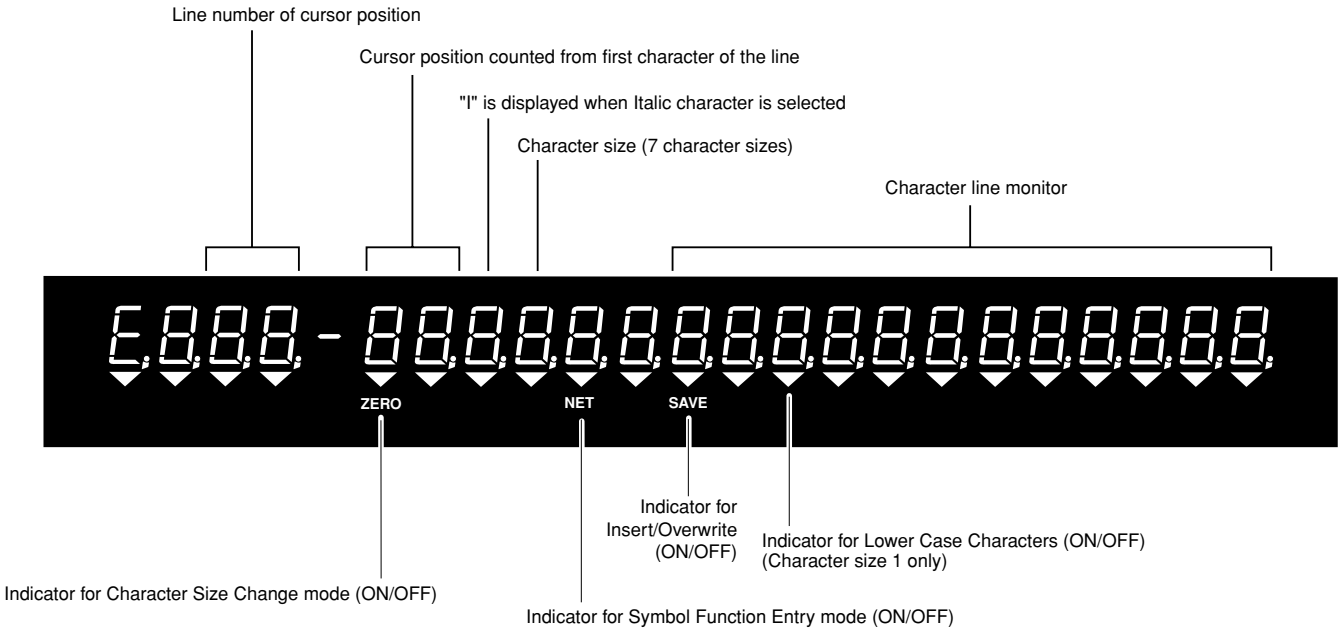
PRICE CHANGE
Used to directly enter the price change menu while in the Registration Mode.

LOWER CASE
Used to select between upper and lower case characters. Available in character size 1 only.

SYMBOL FUNCTION
Used to input right lower symbol of character keys.
First press the **SYMBOL FUNCTION** key and then press the required character keys. Reset is performed each time one symbol is registered.

PLU FILE
Used to directly enter the PLU programming menu while in the Registration Mode.

6.3 Edit Display


Line number of cursor position
Cursor position counted from first character of the line
"I" is displayed when Italic character is selected
Character size (7 character sizes)
Character line monitor
ZERO
NET
SAVE
Indicator for Character Size Change mode (ON/OFF)
Indicator for Symbol Function Entry mode (ON/OFF)
Indicator for Insert/Overwrite (ON/OFF)
Indicator for Lower Case Characters (ON/OFF) (Character size 1 only)

6.4 Edit Examples

PROCEDURES

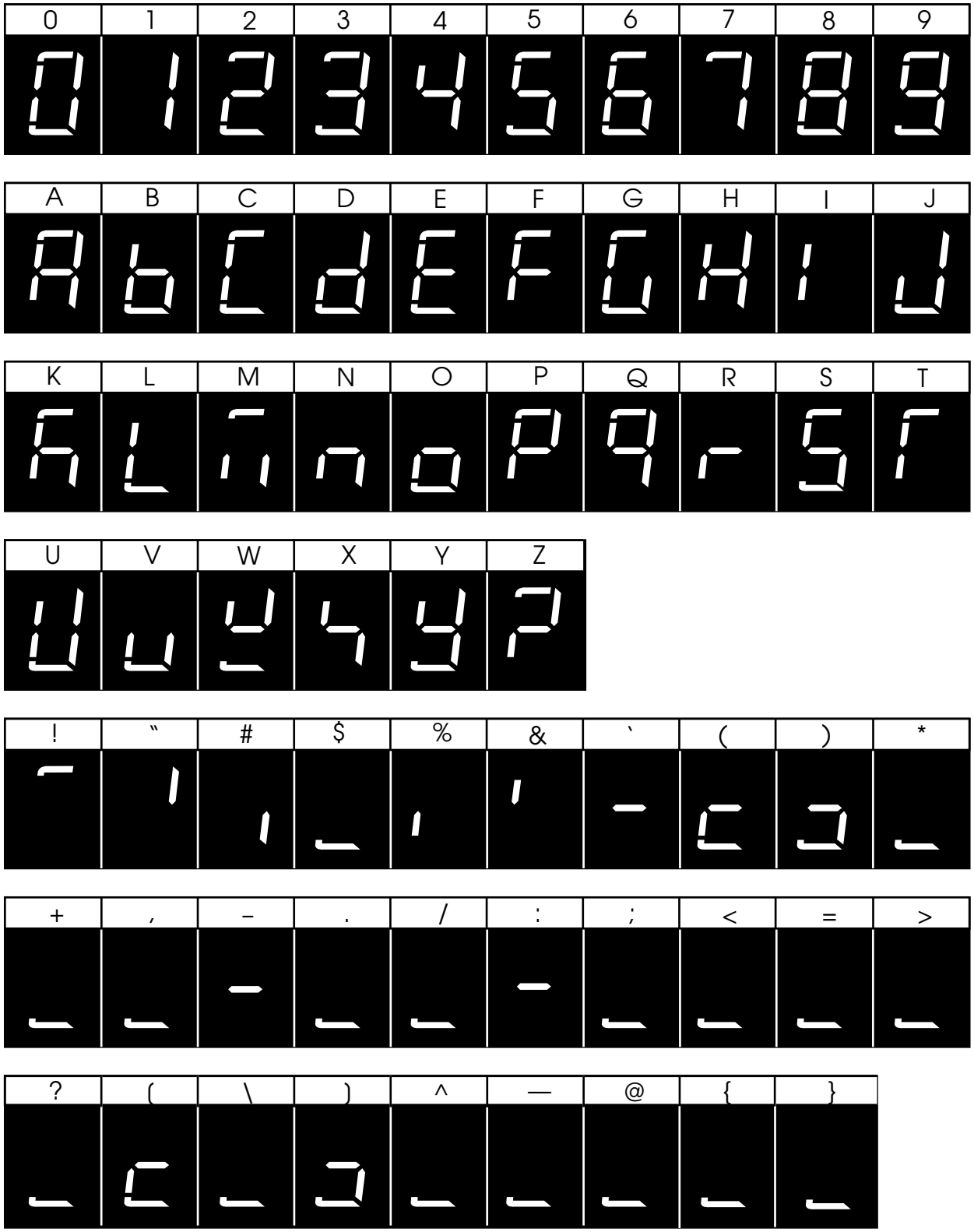
1 **Ensure that the machine is in Edit Mode.**

2 **Key in the desired text using the typewriter style key sheet.**

Example: Text as "Thank You"

3 **Press the ENTER key to save the text.**

6.5 7-Segment Characters



6.6 Wordwrap Function

When editing commodity names and extra messages, automatic carriage return is performed when the cursor is at the furthermost right-hand side position of the character line to be registered.

When the cursor reaches the maximum number of characters for one line, carriage return is made at the nearest space. When there is no space in the line, carriage return is executed when the line reaches the maximum number of characters.

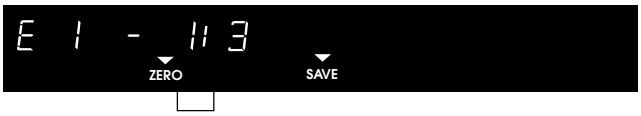
Default word wrap width is 60mm. If a narrower width is required, it is entered in Setup step b01-01-03. See Section 3.2 Label Print.

6.7 Selecting Italic Character Font

PROCEDURES

1 Ensure that the machine is in Edit Mode.

2 Press the SIZE key followed by the RIGHT ARROW key to select the Italic character font.



Italic indicator

3 Press the SIZE key to return to Text Entry Mode. Key in the desired text.

- Standard and italic fonts cannot be printed on the same line.
- All remaining text entry for this item will be in italic font.
- To disable italic font repeat steps 2 and 3.

4 Press the ENTER key to save the text.

6.8 Character Size

The Astra is capable of printing seven different character sizes. These seven sizes can be printed in standard or italic font. Maximum characters per line listed in the table below is based on a 64mm wide label.

Size	Standard	Italic
1*	Maximum 46 characters/line Prints left justified (upper and lower case) 14 x 7 dots	Maximum 46 characters/line Prints left justified (upper and lower case) 14 x 7 dots
2	Maximum 35 characters/line Prints center justified (upper case only) 20 x 10 dots	Maximum 34 characters/line Prints center justified (upper case only) 20 x 10 dots
3**	Maximum 24 characters/line Prints center justified (upper case only) 30 x 15 dots	Maximum 24 characters/line Prints center justified (upper case only) 30 x 15 dots
4	Maximum 18 characters/line Prints center justified (upper case only) 40 x 20 dots	Maximum 18 characters/line Prints center justified (upper case only) 40 x 20 dots
5	Maximum 12 characters/line Prints center justified (upper case only) 60 x 30 dots	Maximum 12 characters/line Prints center justified (upper case only) 60 x 30 dots
6	Maximum 9 characters/line Prints center justified (upper case only) 80 x 40 dots	Maximum 9 characters/line Prints center justified (upper case only) 80 x 40 dots
7	Maximum 6 characters/line Prints center justified (upper case only) 120 x 60 dots	Maximum 6 characters/line Prints center justified (upper case only) 120 x 60 dots

*** Default size for Extra Text Messages.**

****Default size for PLU Names.**

CHAPTER 7
NORMAL MODE

7.1 Normal Mode Operation 76
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7.3 Preset Function Keys 80

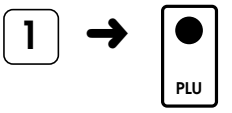
7.1 Normal Mode Operations

1 Ensure that the power is ON, the ZERO indicator is lit and confirm that the initial display appears.

Note: *If the ZERO indicator is not lit, press the **ZERO** key to turn on the indicator.*

2 Key in a PLU number and press the PLU key, or press a preset key.

Example: PLU "1"



Note: *In case of lower preset keys, press the **MODE** key first and then press the required preset key.*

3 If the PLU is to be kept on the display to print additional labels, press the SAVE key. Otherwise skip this step.

Note: *The **SAVE** key must be registered as a preset function key in P04 PRESET KEY of Registration Mode (Section 5.5.2).*

4 If necessary, place an item on the weigh platter to subtract tare weight.
Refer to Section 7.2, "Tare Weight Subtraction" for a more detailed operation.

Note 1: *If the tare weight is already registered in the specified PLU, this step is unnecessary.*

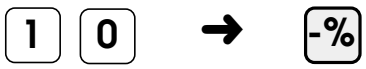
2: *If the PLU is a fixed price item, this step is unnecessary.*

3: *If the **AUTO** indicator is lit, the label is automatically issued immediately after the weight has stabilized.*

4: *To eliminate the **AUTO** indicator, press the **AUTO/MANU** key.*

5 Key in the data and then press the required PRESET FUNCTION key if necessary.
Refer to Section 7.3, "Preset Function Key Definition" for a more detailed procedure.

Example: Apply a "10%" discount



Note: *The **%** key must be registered as a preset function key in P04 PRESET KEY of Registration Mode (Section 5.5.2).*

6 Key in the required number of items and press the "X" key, if necessary.

Note 1: *This is for fixed price items only.*

2: *The "X" key must be registered as a preset function key in "P04 PRESET KEY" of Registration Mode (Section 5.5.2).*

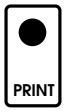
7 Key in the number of labels to be issued, if necessary.

Note 1: *This function is only possible in AUTO Mode.*

2: *This is for fixed price items only.*

3: *In MANUAL Mode, only one label is issued.*

8 Press the PRINT key to issue the label if the machine is in Manual Mode.



Note 1: *When the machine is set to AUTO Mode, the label is issued automatically as soon as weighing has stablized (for weighed items only).*

2: *If in AUTO Mode, and the number of labels to be issued has not been keyed in the previous step, labels are issued continuously. To stop label issue, press the **PRINT** key.*

3: *See operation of **PEEL TIMER** key in Section 7.3, "Preset Function Key Definition". The **PEEL TIMER** key must be registered as a preset function key in "P04 PRESET KEY" of the Registration Mode (Section 5.5.2).*

7.2 Tare Weight Subtraction

Tare weight can be programmed in a specific PLU. When not programmed, either place the tare on the weigh platter and press the **TARE** key or key in the weight if the tare weight is known and press the **TARE** key.

Note: *Tare weight operations mentioned here, may be prohibited in some countries due to Weights and Measures Regulations.*

PROCEDURES

1 **Place the tare on the weigh platter. (Using PLU number 1 without a programmed tare weight)**

Example: Tare weight "0.02 pounds"

2 **(Using PLU number 1 with a programmed tare weight) In this case, no entry is required.**

3 **Although the tare is programmed, you want to delete the tare weight and actually weigh the tare.**

Note: *With no weight on the platter and no numeric entry, press the **TARE** key to clear any previous tare.*

Place the tare (0.02 lb) on the weigh platter.

4 Temporay tare weight change by manual entry.

- This procedure is possible only when entering a larger tare weight.
- To change to a smaller tare weight the current tare must first be cleared. Press the **TARE** key with no weight on the platter to clear the tare.

Example: Tare weight "0.02 pounds"

7.3 Preset Function Keys

The preset function keys listed below must be registered in "P04 PRESET KEY", refer to Section 5.5.2 for details.

FIXED PRICE

FIXED PRICE

Used to temporarily change the selling price for a fixed price item.

1. Call up the desired fixed price item.
2. Key in the price.
3. Press the **FIXED PRICE** key.
4. Press the **PRINT** key to issue label.

X

MULTIPLE

Used to price multiple pieces of an item.

1. Call up the desired fixed price item.
2. Key in the quantity.
3. Press the **X** key.
4. Press the **PRINT** key to issue label.

SPECIAL PRICE

SPECIAL PRICE

Used to temporarily reduce the selling price.

1. Key in the special price after the total price is displayed.
2. Press the **SPECIAL PRICE** key.
3. Press the **PRINT** key to issue label.

- $

AMOUNT DISCOUNT

Used to temporarily subtract an amount from the total price.

1. Key in the amount to be discounted after the total price is displayed.
2. Press the **–$** key.
3. Press the **PRINT** key to issue label.

-%

PERCENT DISCOUNT

Used to temporarily subtract a percentage from the total price.

1. Key in the percentage to be discounted after the total price is displayed.
2. Press the **–%** key.
3. Press the **PRINT** key to issue label.

SAVE

SAVE

Used to maintain the called up PLU data.

1. Call up the desired PLU.
2. Press the **SAVE** key.
   (SAVE indicator is lit.)
3. Press the **SAVE** key again to release.

EXTRA TEXT

EXTRA TEXT

Used to temporarily add extra message text to a PLU description.

1. Call up the desired PLU.
2. Enter the extra message number to be called up.
3. Press the **EXTRA TEXT** key.
4. Place the item on the weigh platter.
   (Not required for fixed price items.)
5. Press the **PRINT** key to issue label.

VOID

VOID

Used to delete the previous transaction from the accumulated totals .

1. Press the **VOID** key immediately after label issue.

PEEL TIMER

PEEL TIMER

Used to set the interval time of label issue in the auto label issue mode for a fixed item.

1. Press the **AUTO**/**MANU** key to select AUTO mode.
2. Call up the desired fixed price item.
3. Key in the interval time (0 to 9) in seconds.
4. Press the **PRINT** key to issue label.

99

DOUBLE 9

Used to enter two 9's with one depression in normal operation mode.

00

DOUBLE 0

Used to enter two 0's with one depression in normal operation mode.

% TARE

PERCENT TARE

Used to set the tare weight based on the percentage of gross weight.
(U.S.A. and Canada only.)

1. Call up the desired weighing item.
2. Enter the percentage for the tare weight. (Units of 0.1%.)
3. Press the **% TARE** key.
4. Place the item on the weigh platter.
5. Press the **PRINT** key to issue label.

CHAPTER 8
TOTAL MODE

8.1 Total Mode Operations 82

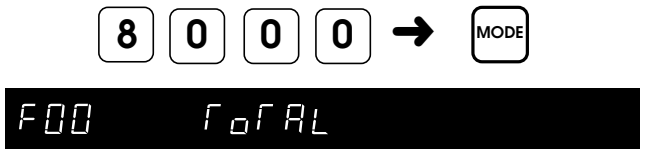
8.1 Total Mode Operations

These operations are usually performed at the end of the working day to verify the processed data from that day.

Note: *By default, totals data are not accumulated. To enable totals data accumulation, see Section 3.7 Total.*

PROCEDURES

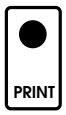
1 **Key in the 4-digit password (default value: 8000) and press the MODE key. The Total mode display will then appear.**



2 **Press the DOWN ARROW key (↓) to enter the Grand Total menu.**

3 **Press the ENTER key to enter the next step.**

4 **Press the PRINT key to print and issue the Grand Total label.**



5 **Press the END key to return to display "F01 GRAND TOTAL".**

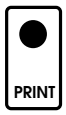
6 **Press the DOWN ARROW key (↓) to enter the Total on Label menu.**

7 **Press the ENTER key to enter the next step.**

- Printing starts from the first PLU number with totals data.
- Starting PLU number can be designated by entering the PLU number and pressing the **PRINT** key.
- To stop printing before completion, press the **ZERO** key.

Note: *If the Total Report on Labels contains many items, don't thread paper onto takeup bobbin. Allow labels to remain on backing paper.*

8 **Press the PRINT key to print and issue the total label of each PLU.**

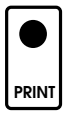


9 **Press the END key to return to display "F01 GRAND TOTAL".**

10 **Press the DOWN ARROW key (↓) until the Total on Paper menu appears or key in "3" followed by the DOWN ARROW key (↓) to directly access the menu.**

11 **Press the ENTER key to enter the next step.**

12 **Press the PRINT key to print and issue the total data of each item on continuous thermal report paper.**



13 **Press the END key to return to display "F01 GRAND TOTAL".**

14 **Press the DOWN ARROW key (↓) until the Total Clear menu appears or key in "4" followed by the DOWN ARROW key (↓) to directly access the menu.**

15 **Press the ENTER key to enter the next step.**

16 **Press the ZERO key twice to clear all total data.**

Note: *When total data clear is executed properly, the OK buzzer sounds and PASS is displayed.*

17 **Press the END key to return to display "F01 GRAND TOTAL".**

18 **Press the MODE key to return to the normal operation mode after all operations of TOTAL MODE are completed.**

CHAPTER 9
SUBTRACTION MODE

9.1 Subtraction Mode Operations 86

9.1 Subtraction Mode Operations

These operations are performed in order to adjust the accumulated totals data.

PROCEDURES

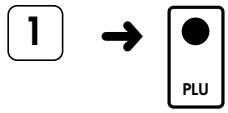
1 **Key in 7000 and press the MODE key to enter the Subtraction Mode.**

2 **Press the ENTER key to enter the next step.**

3 **Key in the PLU number to be subtracted and press the PLU key.**

Note: *If there is no data for the keyed in PLU, the error buzzer sounds.*

Example: PLU number "1"



4 **Press the DOWN ARROW key (↓) to enter the next step.**

5 **Key in the number of pieces to be subtracted and press the FEED key.**

Note: *If keyed in number of pieces to be subtracted exceeds the actual total number of items, all data is cleared.*

Example: Subtract 1 piece from PLU "1"

6 **Press the DOWN ARROW key (↓) to enter the next step.**

7 Key in weight to be subtracted and press the FEED key.

Note 1: *If keyed in weight to be subtracted exceeds the actual total weight, all weight is cleared.*

2: *If there is no weight to be subtracted, the error buzzer sounds.*

Example: Subtract 0.25 lb from PLU "1"

8 Press the DOWN ARROW key (↓) to enter the next step.

9 Key in the price to be subtracted and press the FEED key.

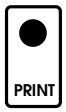
Note 1: *If keyed in price to be subtracted exceeds the actual total price, all prices are cleared.*

2: *If there are no prices to be subtracted, the error buzzer sounds.*

Example: Subtract $1.00 from PLU "1"

10 Press the DOWN ARROW key (↓) to enter the next step.

11 Press the PRINT key to execute the subtraction in accordance with the above steps.



12 Press the MODE key to return to normal operation mode after all operations of Subtraction Mode is completed.

CHAPTER 10
TROUBLESHOOTING

10.1 Before Using the Troubleshooting Chart 90
10.2 Operator Troubleshooting Chart 90
10.3 Service Personnel Troubleshooting Chart 91

10.1 Before Using the Troubleshooting Chart

If you encounter any problems, before proceeding to the troubleshooting chart, reinitialize the machine by pressing the **RESET** key. If the problems continue, follow the instructions listed in the troubleshooting chart. If problems are not solved using the instructions in the troubleshooting chart, contact your service representative.

10.2 Operator Troubleshooting Chart

Error No.	Description	Countermeasure
Err --2	PLU description contains too many characters.	Label printing is not possible because the number of entered characters is too great for the label. Press the **CLEAR** key to return to the previous screen. Check the programming contents based on the specific error number.
Err --4	Extra message is too long.	
Err --7	Store name/address is too long.	
Err --8	Out of labels.	Replace with a new roll of labels. Press the **CLEAR** key to return to the previous screen.
Err --9	Label size error.	The label size may be different from the predetermined size. Press the **CLEAR** key to return to the previous screen. Confirm the label size and replace if necessary.
Err -10	Entered special price is equal to or over the preset price.	Press the **CLEAR** key to return to the previous screen. Try to enter the special price again.
Err -40	Damaged memory.	Contact your service representative.
OuEr Error	Check the scale. Remove items from weigh platter.	The scale reading was not stable when power was turned on, or some item was left on the weigh platter. Remove any items left on the weigh platter.
EnTEr tArE	Tare weight has not been entered.	A tare weight must be entered before a label can be-printed. Refer to Section 3.8 "Forced Tare". Press CLEAR key to return to previous screen.

10.3 Service Personnel Troubleshooting Chart

Description	Cause	Countermeasure
No power	1. Faulty plug connection 2. Burned out fuse 3. Faulty power unit (LSF100-24) 4. Faulty main board (PK-220) 5. Faulty power switch	1. Re-insert plug 2. Replace fuse 3. Check power unit and replace 4. Check main board and replace 5. Check power switch and replace
Enters Test Mode when power is turned ON	1. Faulty keyboard, key switch 2. Faulty main board (PK-220)	1. Check keyboard, key switch and replace 2. Check main board and replace
Does not proceed after display check and goes blank	1. Faulty load cell 2. External vibration 3. Faulty A/D board (PK-219) 4. Faulty main board (PK-220) 5. Faulty power unit (LSF100-24)	1. Adjust and/or replace load cell 2. Check scale environment 3. Check A/D and replace 4. Check main board and replace 5. Check power unit and replace
Weight readings are inaccurate or inconsistent	1. Foreign object is underneath the weigh platter or load cell 2. A four corner limitation screw is making contact with the limit stop 3. Faulty load cell 4. Faulty A/D board (PK-219) 5. Faulty main board (PK-220)	1. Remove foreign object 2. Adjust four-corner limitation screw 3. Check load cell and replace 4. Check A/D board and replace 5. Check main board and replace
A specific digit segment fails to display (other elements display properly)	1. Faulty connector connection 2. Faulty main board (PK-220) 3. Faulty display board	1. Check each connector connection 2. Check main board and replace 3. Check display board and replace
Pressing a specific key gives no response	1. Faulty connector connection 2. Faulty keysheet	1. Confirm connector connection 2. Check keysheet and replace
Programmed data is changed	1. Faulty battery 2. External noise or static electricity is affecting scale 3. Faulty main board (PK-220)	1. Replace battery (battery not rechargeable) 2. Check scale environment 3. Check main board and replace
Entire contents of display disappears during operation	1. Change in voltage 2. Faulty power unit (LSF100-24) 3. Faulty display board (PK-221) 4. Faulty main board (PK-220)	1. Check power voltage 2. Check power unit and replace 3. Check display board and replace 4. Check main board and replace
Doesn't print properly (only 50% is printed)	1. Faulty thermal head cable 2. Faulty thermal head 3. Faulty main board (PK-220) 4. Faulty power unit (LSF100-24)	1. Check cable and replace 2. Check thermal head alignment and replace 3. Check main board and replace 4. Check thermal head print voltage and replace power unit

CHAPTER 11
HARDWARE STRUCTURE

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11.1.2 Parts List 95
11.2 Electrical Diagram 97
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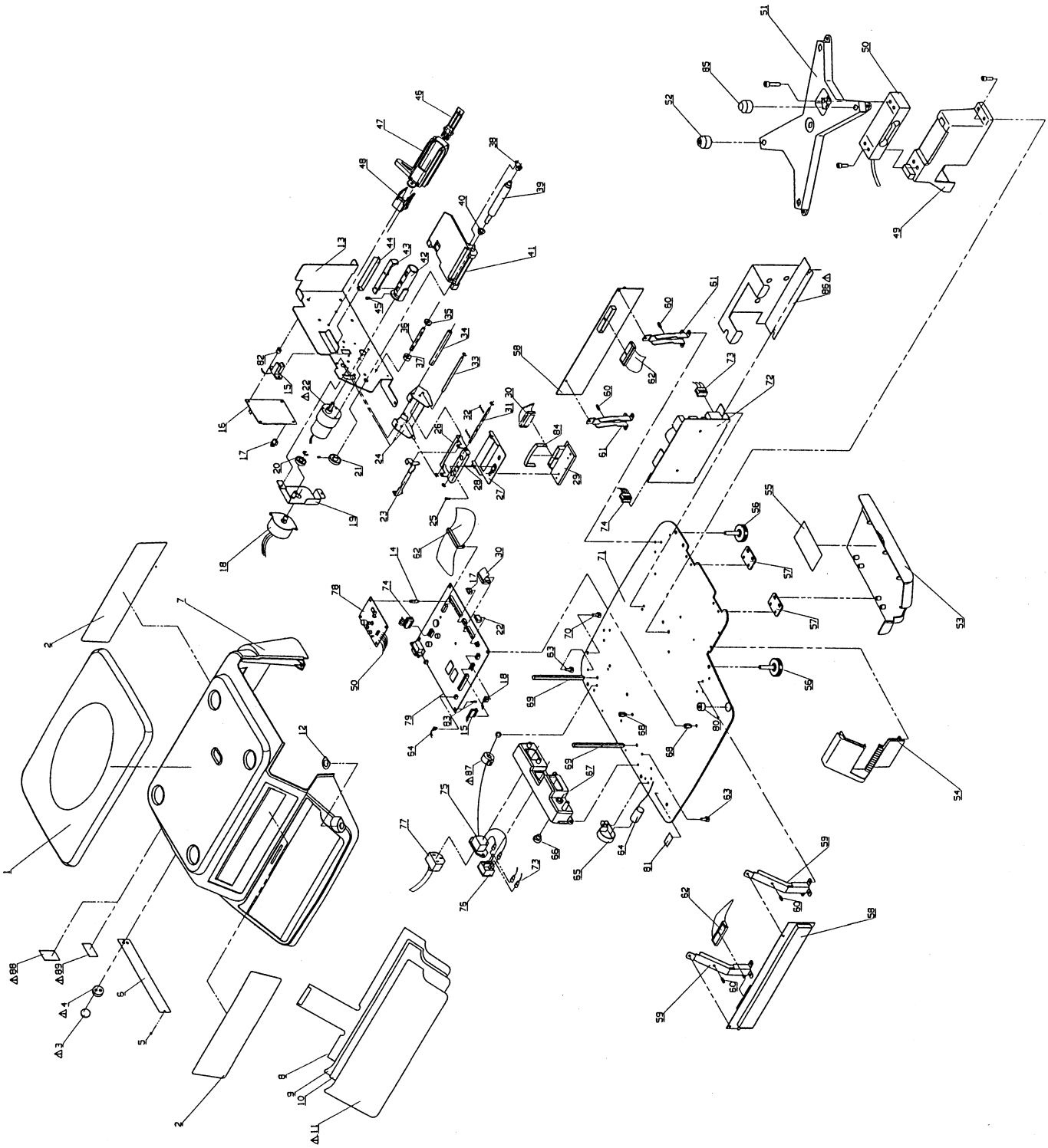
11.2.2 Circuit Boards 98

11.1 Mechanical Structure

11.1.1 Exploded Diagram



11.1.2 Parts List

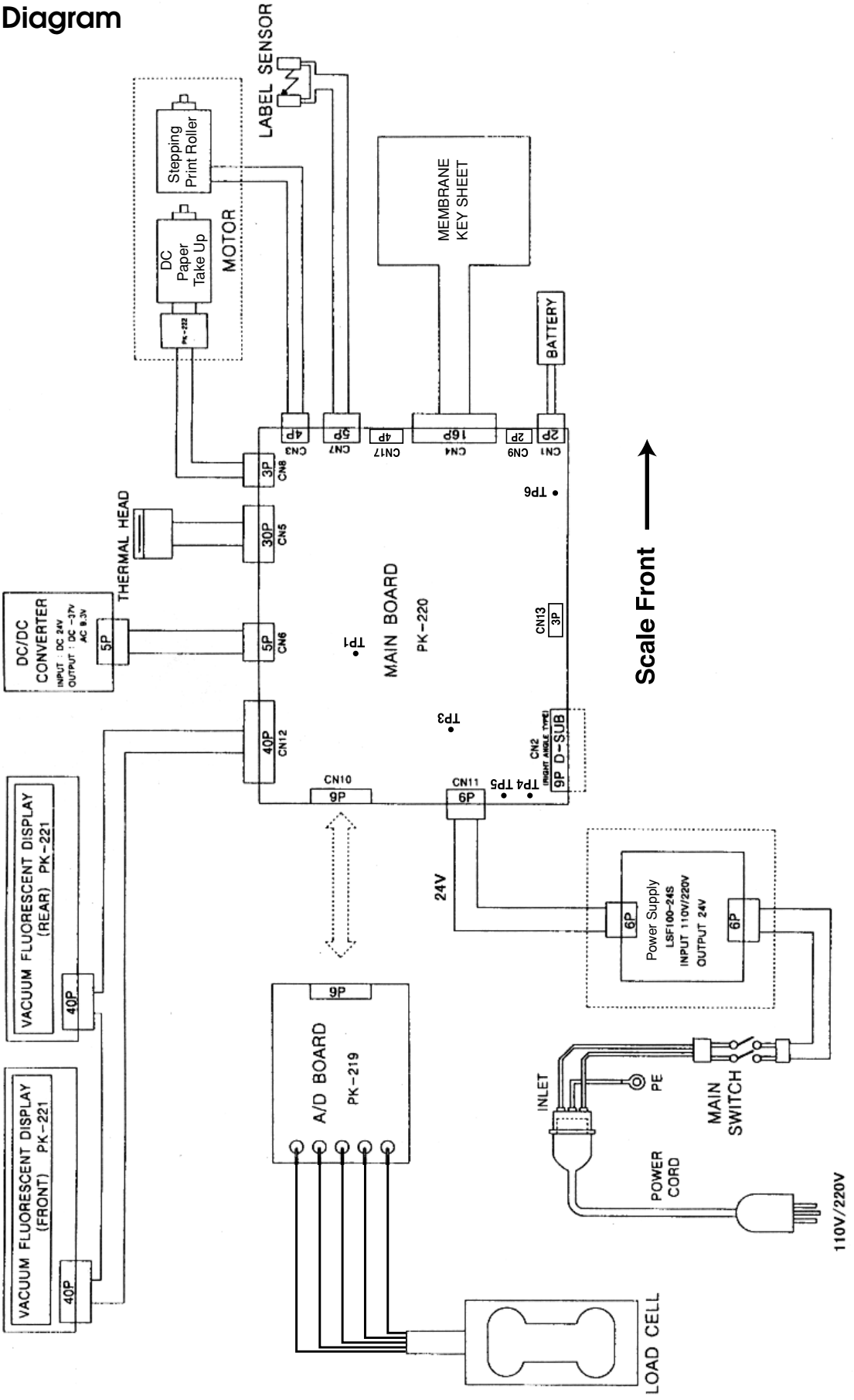
ASTRA USA 30lb Service Parts List (89-2803-00)

No.	Parts Name	Remarks	Parts Number	Quantity
1	PLATTER	66343	89-3007-05	1
2	SHEET:DISPLAY:PANEL	66344	89-2843-18	2
3	SEALING:PB:CIRCLE	-	-	-
4	HOUSING:SEALING:CIRCLE	-	-	-
5	PUSH:RIVET:	42734	00-4761-06	2
6	NAME PLATE:SPEC:	66345	89-2949-00	1
7	CASE:UPPER:	66346	89-2689-01	1
8	SHEET:KEY BOARD:MEMBRANE	66347	89-2852-02	1
9	SHEET:KEY BOARD:SPACER	66348	89-2811-00	1
10	SHEET:KEY BOARD:OPERATION	66349	89-2813-07	1
11	SHEET:KEY BOARD:COVER CLEAR	66350	89-2846-19	1
12	STICKER:LEVEL:	66351	89-2802-15	1
13	FRAME:PRINTER:	66352	89-2701-12	1
14	ACCESSORY:SUPPORT:POST	66353	89-2714-01	4
15	LABEL SENSOR ASS'Y	66354	89-2241-16	1
16	DC/DC CONVERTER	66355	89-2796-07	1
17	HARNESS:S2:DC/DC	66356	89-2782-14	1
18	STEPPING:MOTOR:PRINT ROLLER	66357	89-2735-00	1
19	BRACKET:MOTOR:	66358	89-2703-29	1
20	GEAR:SPUR:DUAL	66359	89-2777-15	1
21	GEAR:SPUR:SINGLE	66360	89-2705-17	1
22	MOTOR:GEARED:MICRO ASS'Y:TAKE UP	66361	89-2997-09	1
23	BRACKET:PUSH:	66362	89-2713-17	1
24	FRAME:HEAD:	66363	89-2707-23	1
25	STEP BOLT:PAN HEAD:	44145	36-0942-00	1
26	BRACKET:LOCK:	66364	89-2709-11	1
27	BRACKET:HEAD:	66365	89-2710-16	1
28	COMPRESSION SPRING	45203	00-6375-09	1
29	THERMAL HEAD	45237	36-2636-16	1
30	HARNESS:S2:THERMAL HEAD	66366	89-2534-08	1
31	SHAFT LOCK	45222	49-6373-12	1
32	TENSION SPRING	45206	00-6377-06	2
33	SHAFT	45221	00-6168-04	1
34	SCREW:BAR:FF	45188	36-2507-00	1
35	GUIDE:LABEL:	45201	20-6991-11	1
36	LABEL GUIDE BAR	45223	00-6173-03	1
37	GUIDE:LABEL:	66367	89-2861-06	1
38	BUSH:RIGHT:	66368	89-2776-21	1
39	ROLLER:PRINTER:	66369	89-2704-13	1
40	BUSH:LEFT:	66370	89-2706-01	1
41	TABLE:LABEL:	66371	89-2702-25	1
42	BOBBIN	66372	89-2711-10	1

43	LEVER:BOBBIN:	66373	89-2712-22	1
44	HOLDER:LABEL:	66374	89-2774-14	1
45	SET:SCREW:	66375	89-2860-02	1
46	LEVER:GUIDE:LABEL	66376	89-2858-04	1
47	HOLDER:LABEL:	66377	89-2778-19	1
48	HOLDER:GUIDE:LABEL	66378	89-2830-01	1
49	BRACKET:LOAD CELL:	66379	89-2695-22	1
50	LOAD CELL:C2G1-25K	44414	89-0643-03	1
51	PLATE SUPPORT	44410	89-1884-17	1
52	RUBBER:PLATE SUPPORT:	44406	89-1631-11	3
53	COVER:SIDE:	66380	89-2690-06	1
54	COVER:FRONT:	66381	89-2691-00	1
55	STICKER:LABEL ROLL LOADING:	66382	89-2854-19	1
56	FOOT:LEVEL:	44423	23-3052-05	4
57	HINGE	66383	89-2694-10	2
58	PWB PK-221(DISPLAY)	66384	89-2793-06	1
59	BRACKET:DISPLAY:FRONT	66385	89-2697-11	2
60	ACCESSORY:SUPPORT:POST	66386	89-2708-09	4
61	BRACKET:DISPLAY:REAR	66387	89-2698-14	2
62	HARNESS:S3:DISPLAY	66389	89-2784-02	1
63	SCREW:SEAL:HEXA	45128	00-6609-00	2
64	BATTERY	66388	89-2827-09	1
65	ACCESSORY:CLAMP:	66390	89-2678-01	1
66	SCREW:SEAL:	44474	89-2025-09	1
67	CASE:CONNECTOR:	66391	89-2693-16	1
68	BAR:HEX:MF	66392	89-2699-09	2
69	BAR:HEX:M	66393	89-2700-00	2
70	SCREW:SEAL:	66394	89-2832-08	1
71	BASE	66395	89-2688-35	1
72	POWER SUPPLY 110V	45132	89-2760-03	1
73	HARNESS:C3:POWER	66396	89-2786-00	1
74	HARNESS:S2:POWER(:C3:POWER)	47073	47-3677-19	-
75	HARNESS:C4:INLET	66397	89-2785-06	1
76	SWITCH:POWER:	66398	89-0349-08	1
77	POWER CORD UL	15438	89-2504-06	1
78	PWB PK-219(A/D BOARD)	66399	89-2637-08	1
79	PWB PK-220A MAIN BOARD	66400	89-2648-09	1
80	LEVEL UNIT	44425	89-0914-02	1
81	STICKER:CAUTION:	-	89-2747-04	1
82	ACCESSORY:SUPPORT:	66419	89-2859-08	4
83	ACCESSORY:SUPPORT:MAIN	66420	89-2677-07	4
84	PLATE A	-	89-2973-28	1
85	RUBBER:PLATE SUPPORT:	66402	89-3006-01	1
86	BRACKET:SEAL:	-	-	
87	FERRITE CORE	66403	-	-
88	UL STICKER	-	89-2798-04	1
89	C-TICK STICKER	-	-	-

11.2 Electrical Diagram

11.2.1 Block Diagram



11.2.2 Circuit Boards

Note: Circuit boards are precision equipment requiring special handling. Check for static electricity before handling.

Main Board (PK-220)

This circuit board contains the CPU as well as controlling the displays, thermal head, printer drive and take-up motors, weight processing, and price calculations.

JP Switch Setting (Fixed)

JP1 to JP3	Transmission Setting	Short-circuiting for A-side (RS-232C) only
JP6	HL connection for UDP65626	Short-circuit 1-2 (VCC)
JP4, JP5, JP7, JP8		(not in use)

Connector List

No.	Details
CN1	Battery: 3V Lithium CR 1/2 AA (non-rechargeable)
CN2	RS232C D-sub-9pin
CN3	Stepping motor - Print roller drive
CN4	Keysheet
CN5	Thermal head
CN6	DC/DC Converter Pin 1: 24V Pin 2: -27V (Vf1) Pin 3: -27V (Vf2) Pin 4: -37V (-VG) Pin 5: Ground
CN7	Label sensor Pin 1: 5V Pin 2: 1.1V Pin 3: 0V (Ground) Pin 4: Sensor: backing paper only >3V, label and backing paper <1.5V
CN8	DC motor - Backing paper take up
CN9	Not in use
CN10	A/D circuit board
CN11	Power Pins 1, 2, 3: 24V Pins 4, 5, 6: Ground
CN12	Display board Pins 35, 37: -27V (Vf1) Pins 38: -37V (-VG) Pins 39, 40: -27V (Vf2)
CN13	Not in use
CN17	Not in use
TP1	RST
TP2	Not in use
TP3	GND
TP4	5V* (VCC)
TP5	24V* (VH)
TP6	Battery* Power on: 5V, power off: 2.8V or less

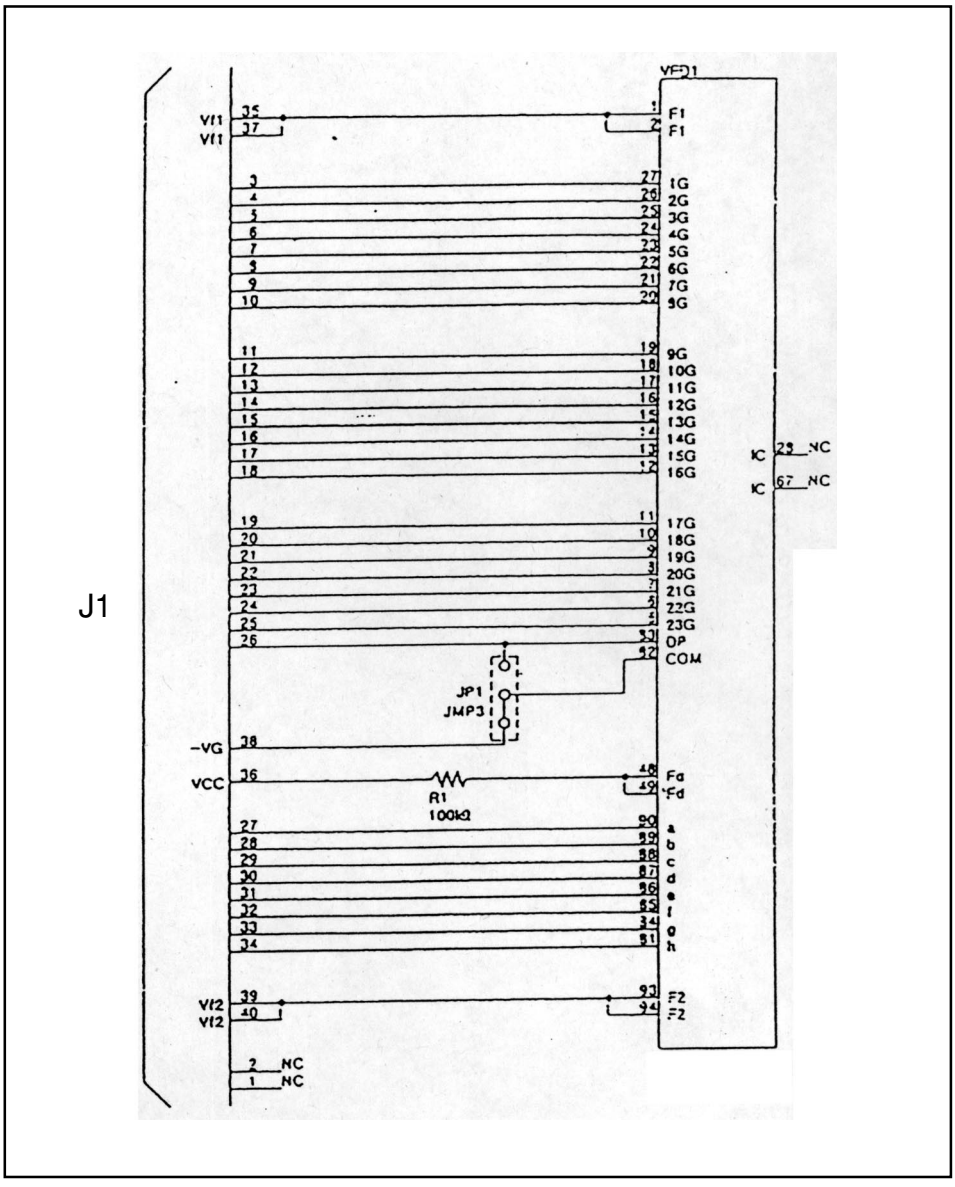
*Measured to TP3 (Ground)

Display Board (PK-221)

Receives signal from Main Board and displays data accordingly.

JP1 Switch Setting	Decimal point selection	Note
Short-circuit COM-DP	,	-
Short-circuit COM-VG	.	USA standard

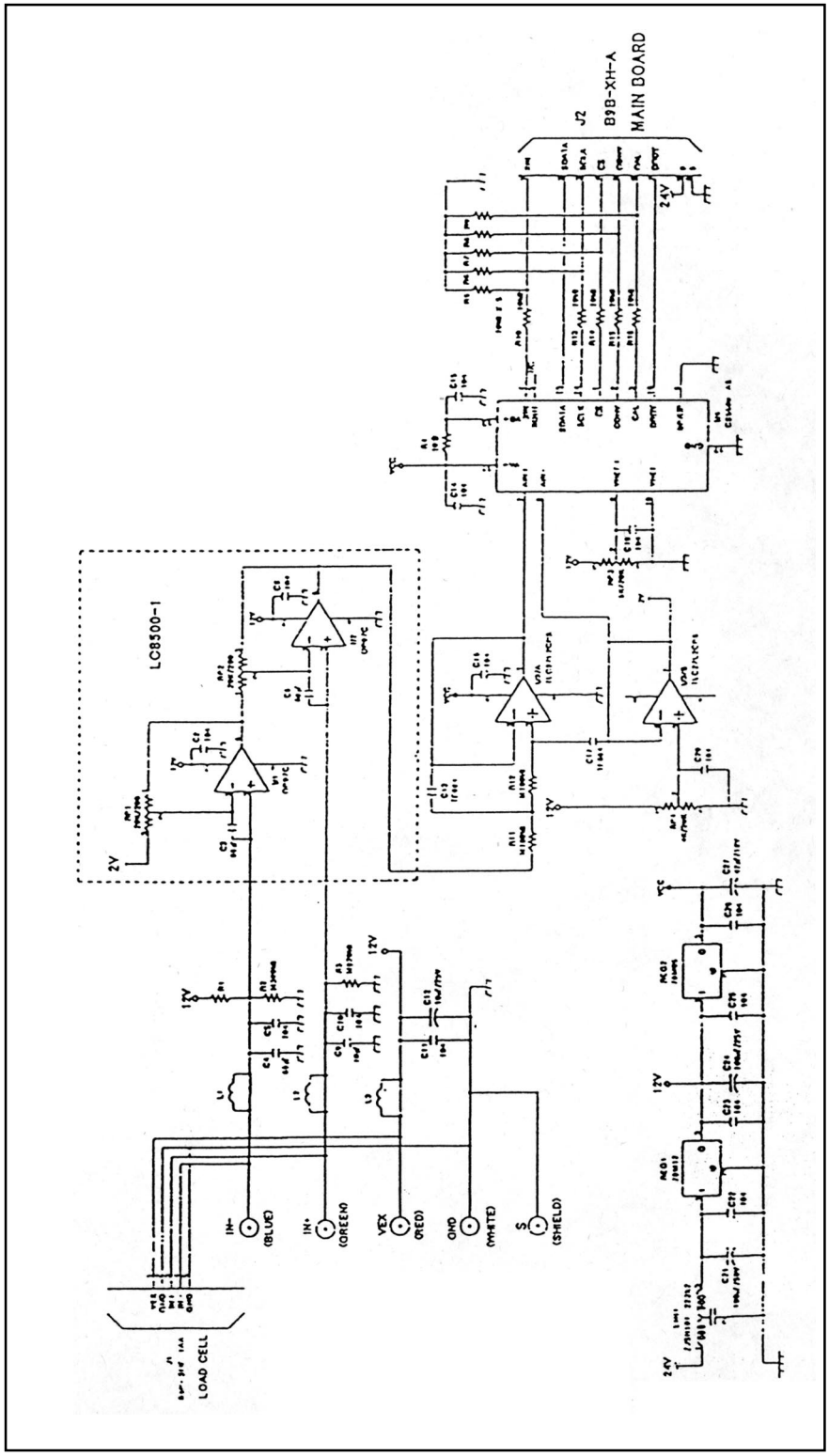
PK-221 Wiring Diagram



A/D Board (PK-219)

This amplifies the load cell output signal (analog) and changes it to digital.

PK-219 Wiring Diagram



CHAPTER 12
MAINTENANCE

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12.3 Parts Replacement 104

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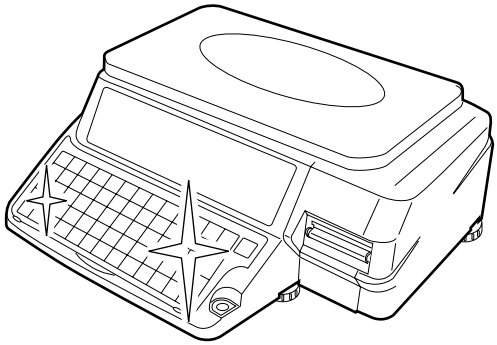
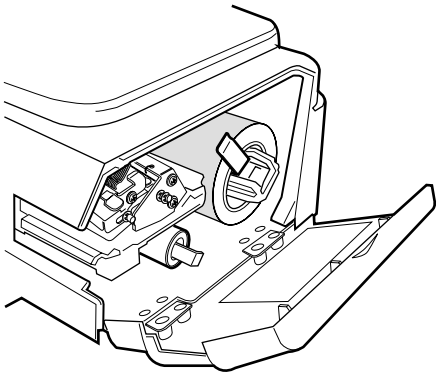
12.3.4 Replacing the Keysheet 110

12.1 Daily Maintenance

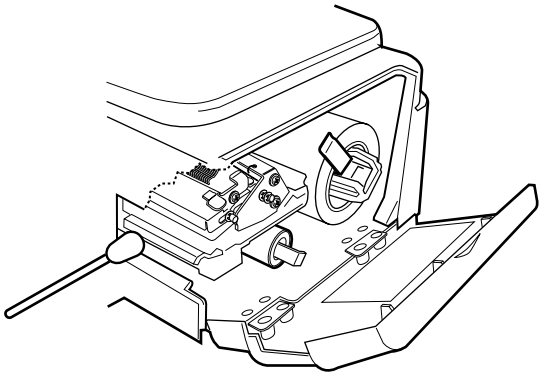
It is recommend that the following measures be performed on the machine on a daily basis.



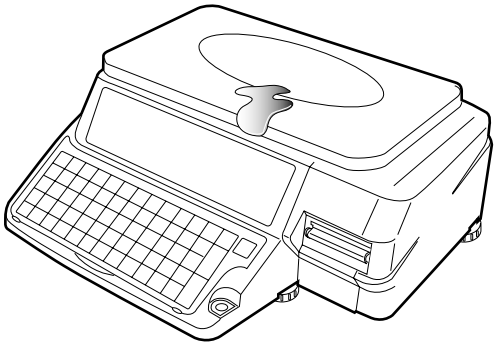
Keep the machine and keysheet free of dust and dirt.



Ensure that there is a sufficient amount of labels remaining in the machine.

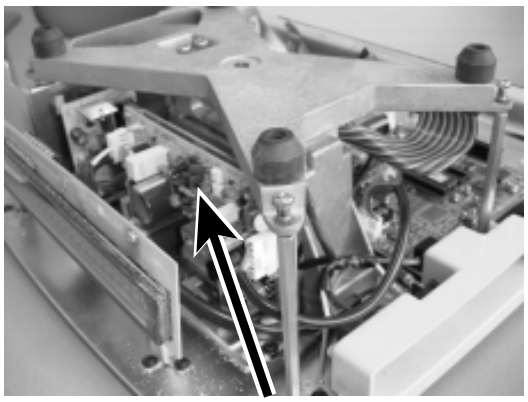


Clean the thermal head with a cotton swab and cleaning alcohol (ethanol) supplied with scale.



Ensure that all spills are wiped clean, especially on the weigh platter.

12.2 Setting the Power Supply Unit (LSF100-24S)

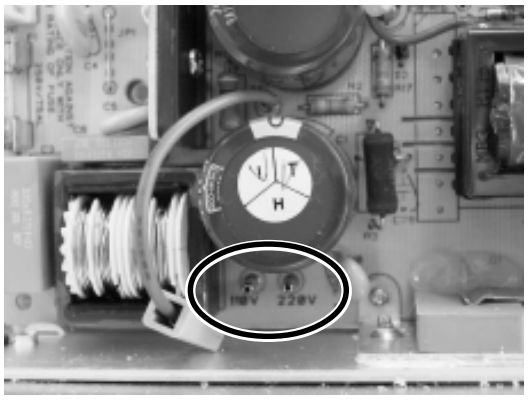


Power Supply

Specification Plate

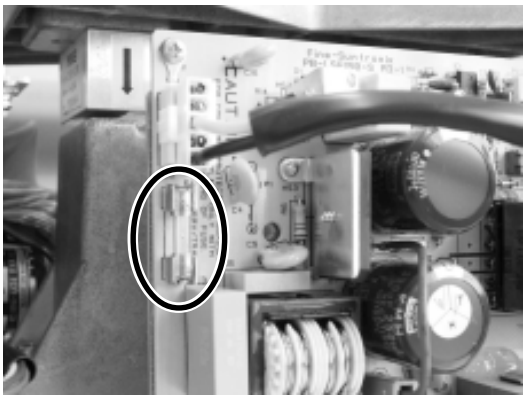
IMPORTANT: Turn the scale off and unplug the power cord before beginning the following procedure.

The power supply can be switched from 110V AC input to 220V AC input by moving the jumper from “100V” to “200V”.



Jumper to select 110V or 220V input

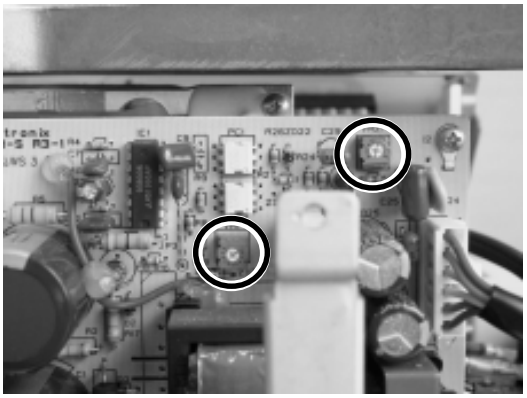
The same fuse is used for both 110V and 220V configuration.



Fuse

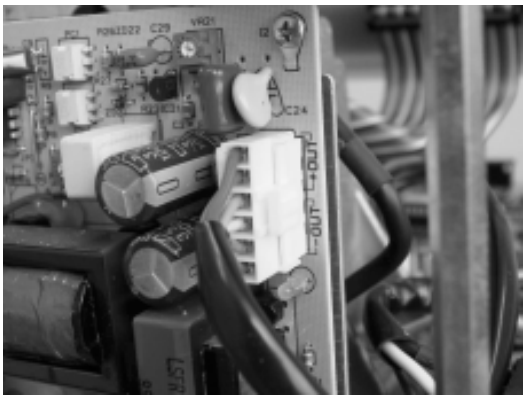
VR1 and VR21 are factory set. **Don’t re-adjust them**.

1) VR1: Adjusts over current protection point. Adjusted to 110% to 130% of peak current
2) VR21: Adjusts DC voltage output to 24V ±1% .



VR1 and VR21

The LED21 is On when 24V is output.



LED21 (24V DC output)

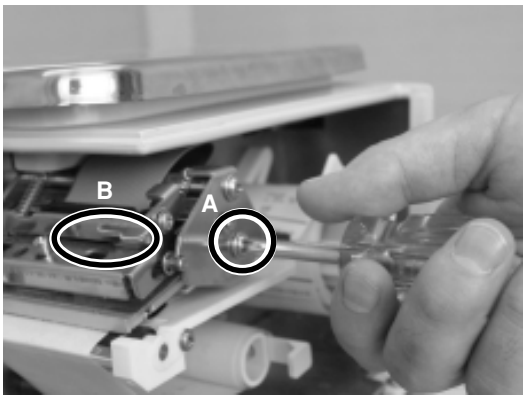
12.3 Parts Replacement

12.3.1 Replacing the Thermal Head

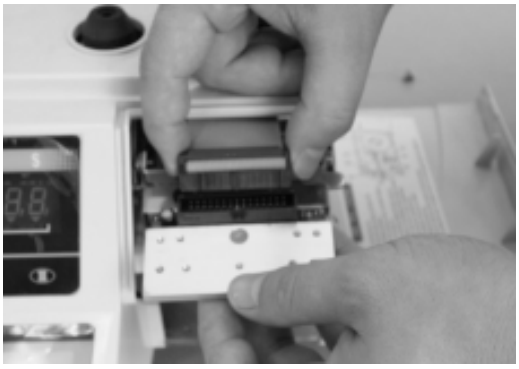
IMPORTANT: Turn the scale off and unplug the power cord before beginning the following procedure.

1. Remove the two screws underneath the scale and remove the front printer cover.

2. Loosen the two screws fastening the thermal head.



3. Remove screw A. Raise lever B and pull out the thermal head.



4. Disconnect the thermal head from the ribbon cable.

5. Note the resistance of the new thermal head.

6. Install the new thermal head following Steps 1 through 4 in reverse order.

7. Enter Test Mode, Step C03, and set the new thermal head resistance and reset the print usage value to zero. (Refer to Section 4.4 Print Head)

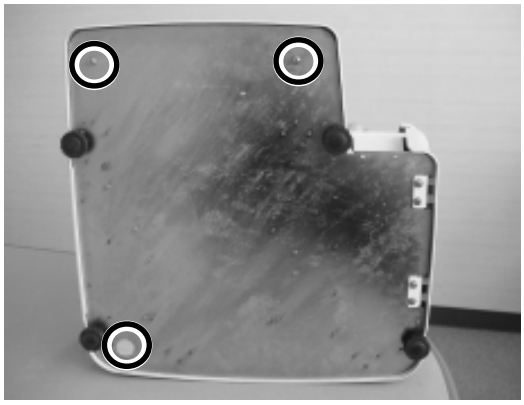
12.3.2 Replacing the Load Cell

IMPORTANT: Turn the scale off and unplug the power cord before beginning the following procedure.

After replacing the load cell, it may be necessary to have the scale re-certified. (Refer to local regulations.)

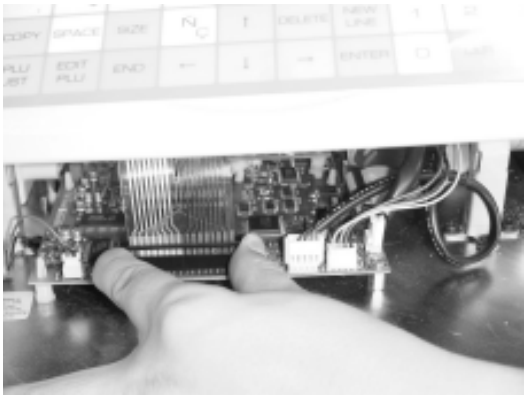
1. Remove the weigh platter.

2. Remove the two screws underneath the scale and remove the front printer cover.

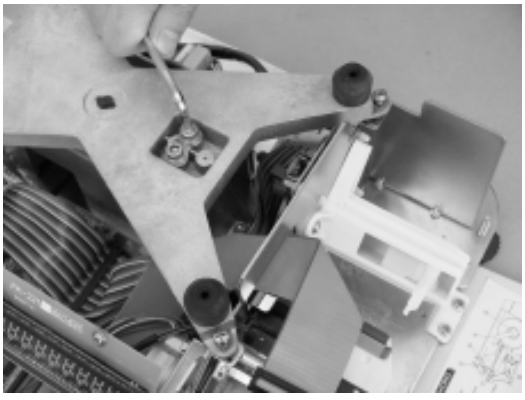


3. Remove the three screws underneath the scale that secure the cover.

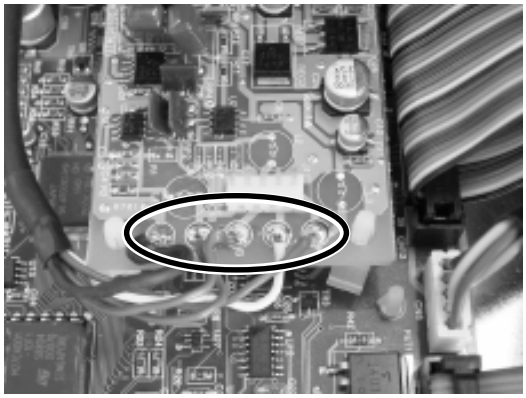
4. Remove the screw fastening the cover. Tip the cover forward.



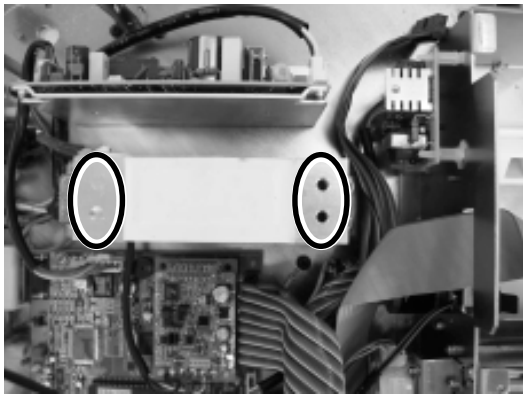
5. Lift the collar on the keyboard cable connector. Disconnect the keyboard cable.



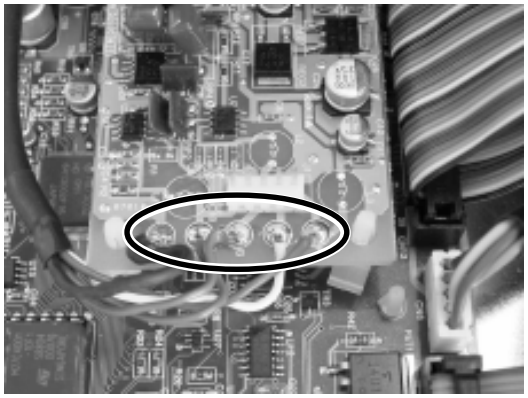
6. Remove the two weigh platter support screws. (5mm allen wrench).



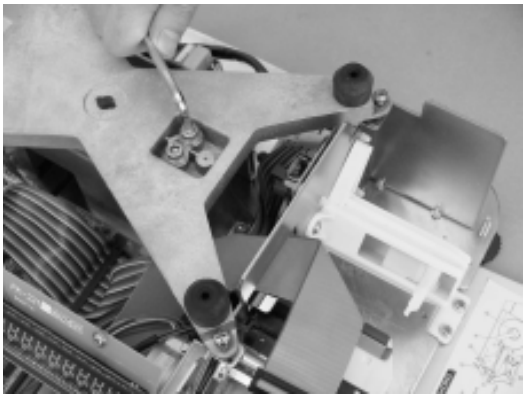
7. Use a soldering iron to remove the load cell cable from the A/D board.



8. Remove the three socket head bolts (4mm) and remove the load cell assembly.
   Install the new load cell.

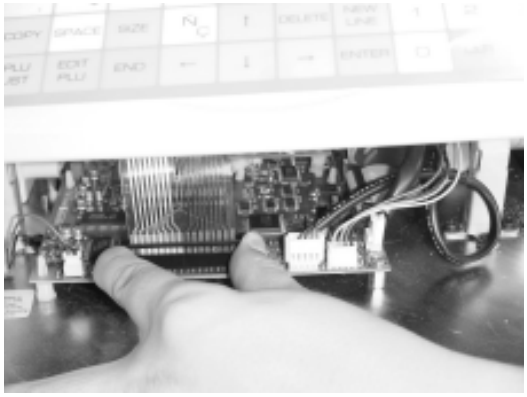


9. Use a soldering iron to solder the load cell cable to the A/D board.



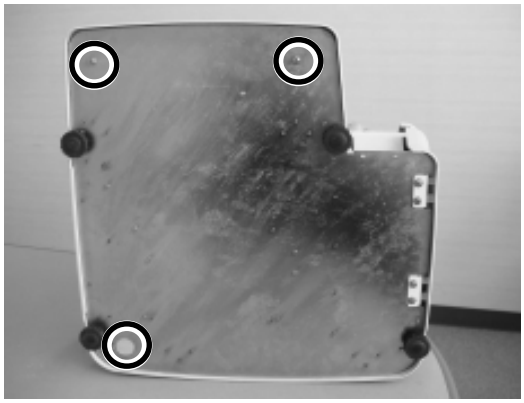
10. Position and fasten the weigh platter support. (**Note:** the solid tray support is in the right, operator side corner).

11. Check four-corner adjustment. Place a weight equal to scale capacity (30lbs/15kg) plus 10% (3lbs/1.5kg) on each corner of the weigh platter. If necessary, rotate each of the four corner adjustment screws so that they barely make contact with the limit stops when the weight is loaded.



12. Lift the collar on the keyboard cable conector. Insert the keyboard cable in to the main board connector. Push the collar down to secure the cable.

13. Fasten the cover.



14. Reinstall the three screws underneath the scale that secure the cover.

15. Place the weigh platter on the support. Check that the main body cover and weigh platter are properly aligned. If they are not properly aligned, remove and re-fasten the weigh platter support and tighten after adjustment.

16. Enter Test Mode, Step C01-01 and calibrate the scale. (Refer to Section 4.2.1 A/D Calibration)

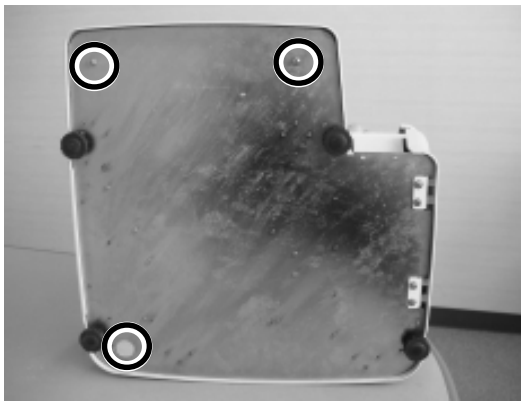
12.3.3 Replacing the Print Roller

IMPORTANT: Turn the scale off and unplug the power cord before beginning the following procedure.

The main body cover must be removed. Since the certification seal has to be removed, it may be necessary to have the scale re-certified. (Refer to local regulations)

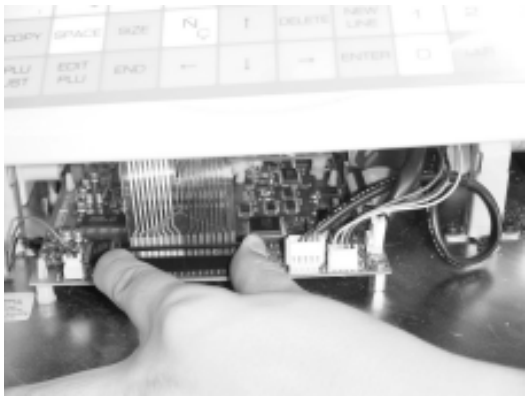
1. Remove the weigh platter.

2. Remove the two screws underneath the scale and remove the front printer cover.

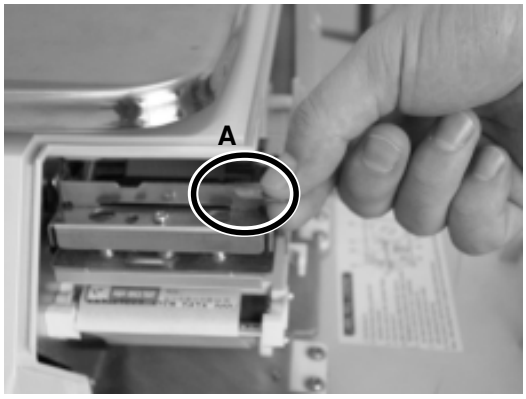


3. Remove the three screws underneath the scale that secure the cover.

4. Remove the screw fastening the cover. Tip the cover forward.

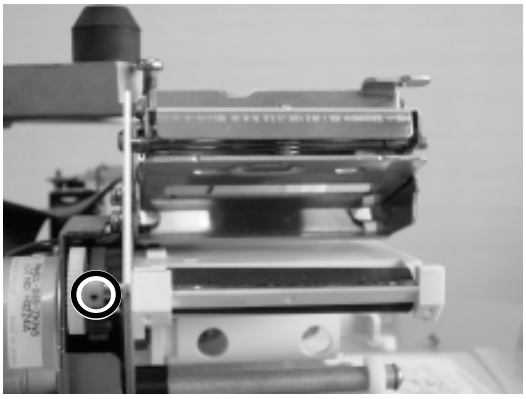


5. Lift the collar on the keyboard cable connector. Disconnect the keyboard cable.



6. Raise lever A.

7. Remove the screw and plastic clip holding the print roller.



8. Remove the spring pin and remove the gear and print roller.

9. Install the new print roller following Steps 1 through 8 in reverse order. Be sure to secure the keyboard cable by pressing down on the connector collar after inserting the cable.

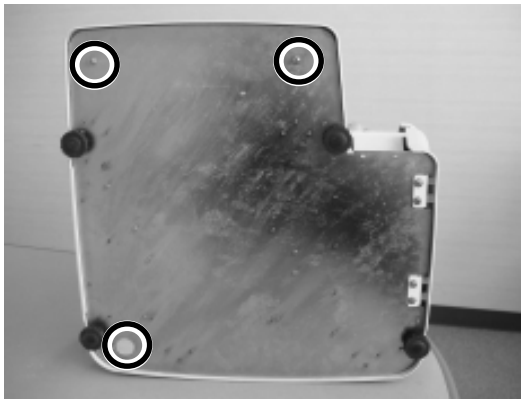
12.3.4 Replacing the Keysheet

IMPORTANT: Turn the scale off and unplug the power cord before beginning the following procedure.

IMPORTANT: Once the keyboard has been removed, it cannot be reused. It is strongly recommended that the new keyboard be connected and tested while it is still loose. This will confirm that the original keys are faulty.

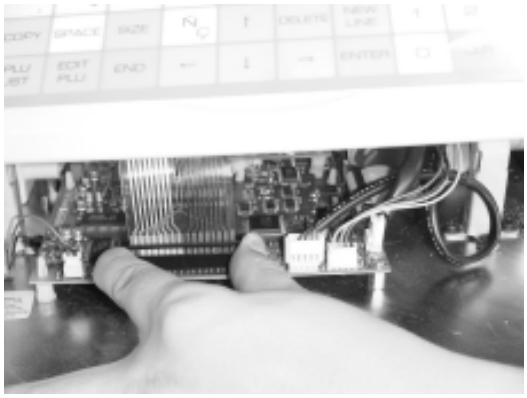
1. Remove the weigh platter.

2. Remove the two screws underneath the scale and remove the front printer cover.



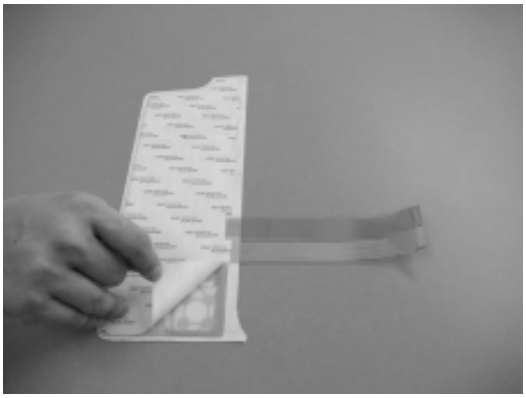
3. Remove the 3 screws underneath the scale that secure the cover.

4. Remove the screw fastening the cover. Tip the cover forward.

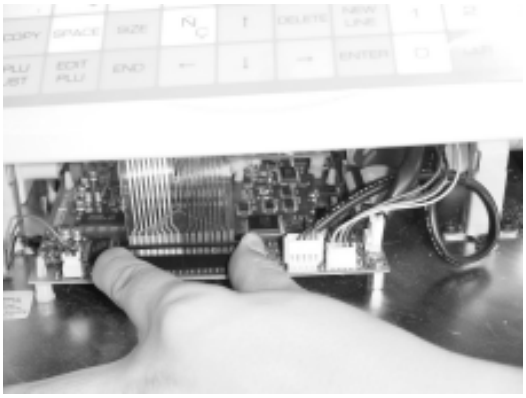


5. Lift the collar on the keyboard cable connector. Disconnect the keyboard cable.

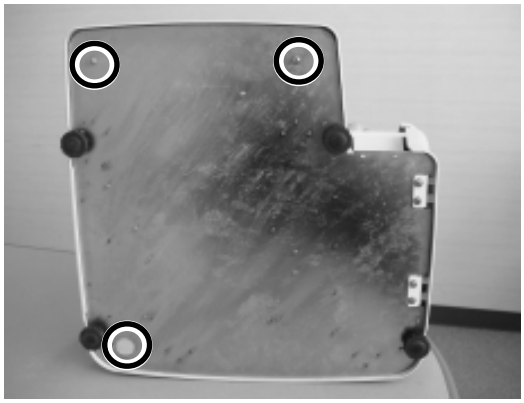
6. Insert a screwdriver in the area indicated by the arrow. Peel off the keyboard but be careful not to damage the main body.



7. Peel off the backing paper of the new keyboard. Be careful not to allow any debris to stick to the keyboard. Thread the cable through the main body cover and carefully attach the keyboard.



8. Lift the collar on the keyboard cable connector. Insert the keyboard cable in to the main board connector. Push the collar down to secure the cable.



9. Fasten the cover.

10. Reinstall the three screws underneath the scale that secure the cover.

11. Place the weigh platter on the support. Check that the main body cover and weigh platter are properly aligned. If they are not properly aligned, remove and re-fasten the weigh platter support and tighten after adjustment.

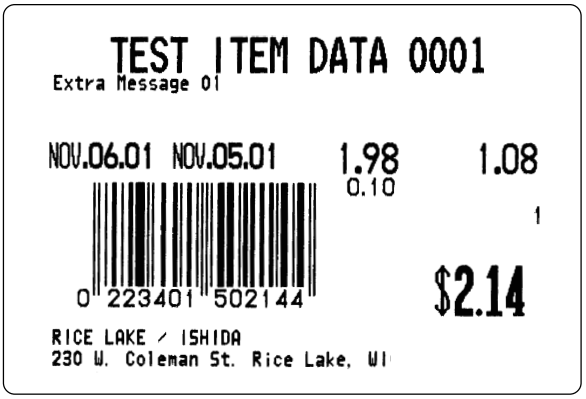
12. Enter Test Mode C01-02 to check that all keys function properly. (Refer to Section 4.2.2 Key Check)

APPENDIX

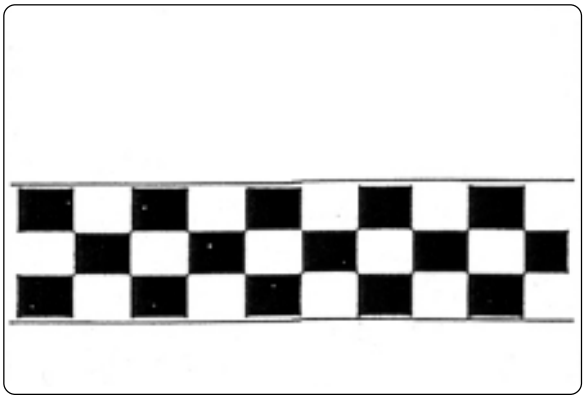
A.1 Sample Labels 114
A.2 Label Format Worksheets 119
A.3 Communication Cable Wiring Diagram 135

A.1 Sample Labels

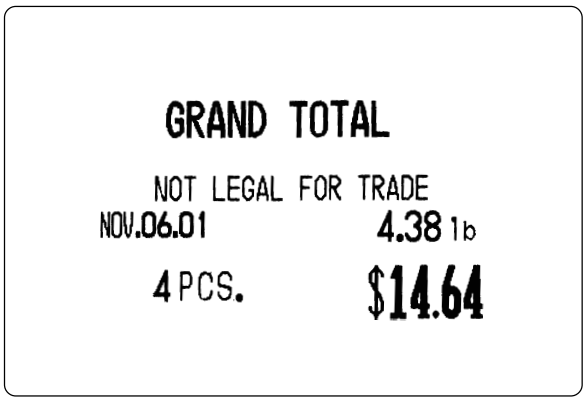
Shown below and on the following pages are sample Weighed and Fixed Price Item labels.



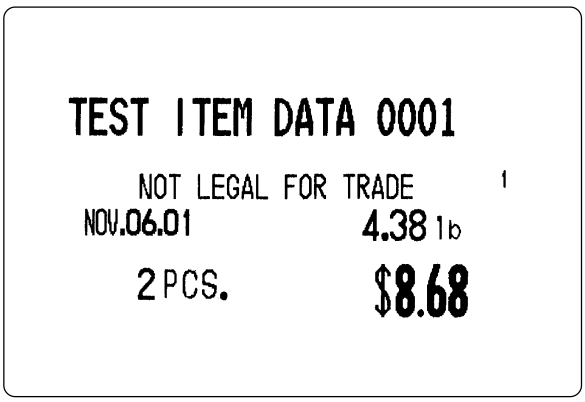
ITEM LABEL



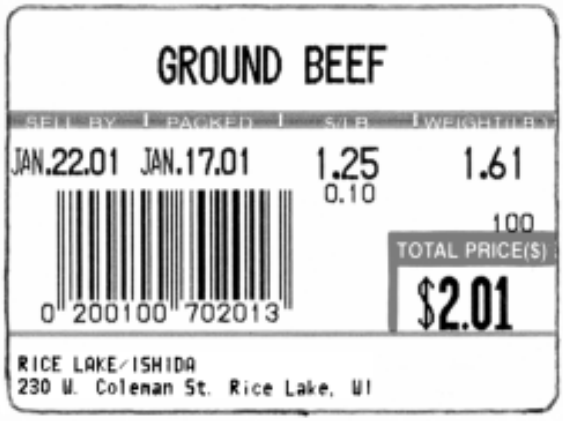
TEST LABEL



TOTALS LABEL (GRAND TOTAL)



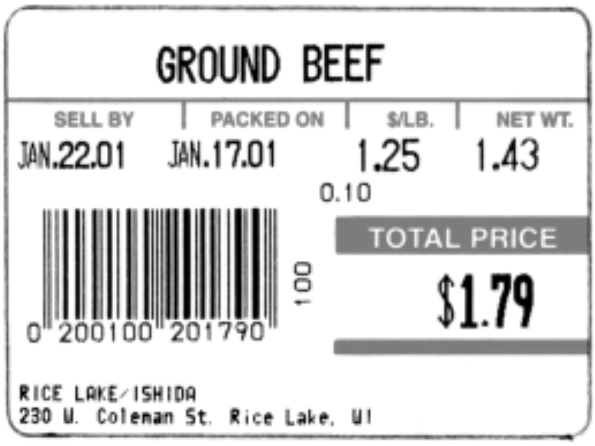
TOTALS LABEL (ITEM)



WEIGHED ITEM

FIXED PRICE ITEM

Format #1 (60mm × 44mm) Part #47732



WEIGHED ITEM

FIXED PRICE ITEM

Format #2 (64mm × 47mm) Part #47733

GROUND BEEF
SAFE HANDLING INSTRUCTIONS
THIS PRODUCT WAS PREPARED FROM INSPECTED AND PASSED MEAT AND/OR POULTRY. SOME FOOD PRODUCTS MAY CONTAIN BACTERIA THAT COULD CAUSE ILLNESS IF THE PRODUCT IS MISHANDLED OR COOKED IMPROPERLY. FOR YOUR PROTECTION, FOLLOW THESE SAFE HANDLING INSTRUCTIONS.
KEEP REFRIGERATED OR FROZEN. THAW IN REFRIGERATOR OR MICROWAVE.
KEEP RAW MEAT AND POULTRY SEPARATE FROM OTHER FOODS. WASH WORKING SURFACES (INCLUDING CUTTING BOARDS), UTENSILS, AND HANDS AFTER TOUCHING RAW MEAT OR POULTRY.
COOK THOROUGHLY.
KEEP HOT FOODS HOT. REFRIGERATE LEFTOVERS IMMEDIATELY OR DISCARD.
SELL BY
JAN.22.01
PACKED ON
JAN.17.01
$/LB.
1.25
NET WT. (LB.)
1.43
0.10
0 200100 201790
100
TOTAL PRICE $
$1.79
RICE LAKE/ISHIDA
230 W. Coleman St. Rice Lake, WI

APPLE TURNOVER
SAFE HANDLING INSTRUCTIONS
THIS PRODUCT WAS PREPARED FROM INSPECTED AND PASSED MEAT AND/OR POULTRY. SOME FOOD PRODUCTS MAY CONTAIN BACTERIA THAT COULD CAUSE ILLNESS IF THE PRODUCT IS MISHANDLED OR COOKED IMPROPERLY. FOR YOUR PROTECTION, FOLLOW THESE SAFE HANDLING INSTRUCTIONS.
KEEP REFRIGERATED OR FROZEN. THAW IN REFRIGERATOR OR MICROWAVE.
KEEP RAW MEAT AND POULTRY SEPARATE FROM OTHER FOODS. WASH WORKING SURFACES (INCLUDING CUTTING BOARDS), UTENSILS, AND HANDS AFTER TOUCHING RAW MEAT OR POULTRY.
COOK THOROUGHLY.
KEEP HOT FOODS HOT. REFRIGERATE LEFTOVERS IMMEDIATELY OR DISCARD.
SELL BY
JAN.18.01
PACKED ON
1 PC. @ 1 /
$/LB.
$1.45
12oz
0 200200 101457
200
TOTAL PRICE $
$1.45
RICE LAKE/ISHIDA
230 W. Coleman St. Rice Lake, WI

WEIGHED ITEM **FIXED PRICE ITEM**

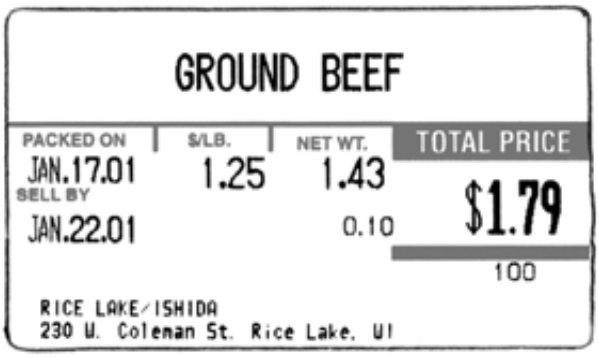
Format #3 (64mm × 85mm – Safe Handling) Part #47743

GROUND BEEF
SAFE HANDLING INSTRUCTIONS
THIS PRODUCT WAS PREPARED FROM INSPECTED AND PASSED MEAT AND/OR POULTRY. SOME FOOD PRODUCTS MAY CONTAIN BACTERIA THAT COULD CAUSE ILLNESS IF THE PRODUCT IS MISHANDLED OR COOKED IMPROPERLY. FOR YOUR PROTECTION, FOLLOW THESE SAFE HANDLING INSTRUCTIONS.
KEEP REFRIGERATED OR FROZEN. THAW IN REFRIGERATOR OR MICROWAVE.
KEEP RAW MEAT AND POULTRY SEPARATE FROM OTHER FOODS. WASH WORKING SURFACES (INCLUDING CUTTING BOARDS), UTENSILS, AND HANDS AFTER TOUCHING RAW MEAT OR POULTRY.
COOK THOROUGHLY.
KEEP HOT FOODS HOT. REFRIGERATE LEFTOVERS IMMEDIATELY OR DISCARD.
NET WT lbs
1.43
PRICE/ lb $
1.25
DATE
JAN.22.01
JAN.17.01
0 200100 201790
100
0.10
TOTAL PRICE
$1.79
RICE LAKE/ISHIDA
230 W. Coleman St. Rice Lake, WI

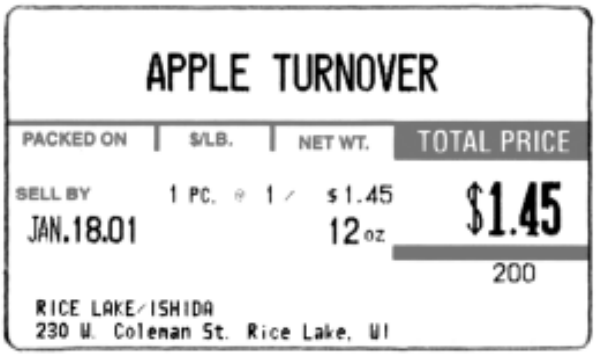
APPLE TURNOVER
SAFE HANDLING INSTRUCTIONS
THIS PRODUCT WAS PREPARED FROM INSPECTED AND PASSED MEAT AND/OR POULTRY. SOME FOOD PRODUCTS MAY CONTAIN BACTERIA THAT COULD CAUSE ILLNESS IF THE PRODUCT IS MISHANDLED OR COOKED IMPROPERLY. FOR YOUR PROTECTION, FOLLOW THESE SAFE HANDLING INSTRUCTIONS.
KEEP REFRIGERATED OR FROZEN. THAW IN REFRIGERATOR OR MICROWAVE.
KEEP RAW MEAT AND POULTRY SEPARATE FROM OTHER FOODS. WASH WORKING SURFACES (INCLUDING CUTTING BOARDS), UTENSILS, AND HANDS AFTER TOUCHING RAW MEAT OR POULTRY.
COOK THOROUGHLY.
KEEP HOT FOODS HOT. REFRIGERATE LEFTOVERS IMMEDIATELY OR DISCARD.
NET WT lbs
1 PC.
PRICE/ lb $
DATE
JAN.18.01
0 200200 101457
200
12oz
TOTAL PRICE
$1.45
RICE LAKE/ISHIDA
230 W. Coleman St. Rice Lake, WI

WEIGHED ITEM **FIXED PRICE ITEM**

Format #4 (64mm × 59mm – Safe Handling) Part #47736



WEIGHED ITEM



FIXED PRICE ITEM

Format #5 (64mm × 37mm – Non-barcode) Part #47762

WEIGHED ITEM

FIXED PRICE ITEM

Format #6 (64mm × 59mm – Extended Text) Part #47735
(Not available in all versions)

WEIGHED ITEM **FIXED PRICE ITEM**

Format #7 (64mm × 85mm – Extended Text) Part #47743
(Not available in all versions)

GROUND BEEF
SAFE HANDLING INSTRUCTIONS
THIS PRODUCT WAS PREPARED FROM INSPECTED AND PASSED MEAT AND/OR POULTRY. SOME FOOD PRODUCTS MAY CONTAIN BACTERIA THAT COULD CAUSE ILLNESS IF THE PRODUCT IS MISHANDLED OR COOKED IMPROPERLY. FOR YOUR PROTECTION, FOLLOW THESE SAFE HANDLING INSTRUCTIONS.
KEEP REFRIGERATED OR FROZEN. THAW IN REFRIGERATOR OR MICROWAVE.
KEEP RAW MEAT AND POULTRY SEPARATE FROM OTHER FOODS. WASH WORKING SURFACES (INCLUDING CUTTING BOARDS), UTENSILS, AND HANDS AFTER TOUCHING RAW MEAT OR POULTRY.
COOK THOROUGHLY.
KEEP HOT FOODS HOT. REFRIGERATE LEFTOVERS IMMEDIATELY OR DISCARD.
SELL BY
PACKED ON
$/LB.
NET WT.
FEB.04.01
JAN.30.01
1.25
0.67
0.10
TOTAL PRICE
0 200100 600845
100
$0.84
RICE LAKE/ISHIDA
230 W. Coleman St. Rice Lake, WI

APPLE TURNOVER
SAFE HANDLING INSTRUCTIONS
THIS PRODUCT WAS PREPARED FROM INSPECTED AND PASSED MEAT AND/OR POULTRY. SOME FOOD PRODUCTS MAY CONTAIN BACTERIA THAT COULD CAUSE ILLNESS IF THE PRODUCT IS MISHANDLED OR COOKED IMPROPERLY. FOR YOUR PROTECTION, FOLLOW THESE SAFE HANDLING INSTRUCTIONS.
KEEP REFRIGERATED OR FROZEN. THAW IN REFRIGERATOR OR MICROWAVE.
KEEP RAW MEAT AND POULTRY SEPARATE FROM OTHER FOODS. WASH WORKING SURFACES (INCLUDING CUTTING BOARDS), UTENSILS, AND HANDS AFTER TOUCHING RAW MEAT OR POULTRY.
COOK THOROUGHLY.
KEEP HOT FOODS HOT. REFRIGERATE LEFTOVERS IMMEDIATELY OR DISCARD.
SELL BY
PACKED ON
$/LB.
NET WT.
FEB.01.01
1 PC. @ 1 / $1.45
12oz
TOTAL PRICE
0 200200 101457
200
$1.45
RICE LAKE/ISHIDA
230 W. Coleman St. Rice Lake, WI

WEIGHED ITEM **FIXED PRICE ITEM**

Format #8 (64mm × 85mm Reduced S.H.) Part #47745
(Not available in all versions)

A.2 Label Format Worksheets

Format 1: 60mm × 44mm Label with Barcode

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
00	Label Image Size	0600	0440	**(Fixed)**	**(Fixed)**
01	Barcode	0045	0240		
02	Pack Date	0154	0287		
03	Expire Date	0011	0287		
04	Unit Price ($/lb)	0297	0287		
05	Weight	0458	0287		
06	Total Price	0381	0143		
07	Discounted Total Price	0401	0143		
08	Price Before Discount	0401	0110		
09	PLU Number	0486	0213		
10	PLU Description	0015	0430		
11	Store Address	0015	0040		
12	Store Name	0015	0065		
13	“Sell By…” title - Weighed	0010	0317		
14	“Sell By” title - Fixed Price	0010	0317		
15	“Total Price” title - Fixed Price	0350	0195		
16	Total Ounces	0338	0247		
17	Pounds - inside ( )	0435	0247		
18	Ounces - inside ( )	0513	0247		
19	“oz” symbol - Total Ounces	0397	0236		
20	“(” symbol	0420	0247		
21	“)” symbol	0578	0247		
22	“lb” symbol - inside ( )	0477	0236		
23	“oz” symbol - inside ( )	0555	0236		
24	Piece Count - Fixed Price	0157	0291		
25	“PCS” symbol - Fixed Price	0224	0287		
26	@ Count - Fixed Price	0305	0291		
27	“@” symbol - Fixed Price	0286	0287		
28	“/” symbol - Fixed Price	0373	0287		
29	@/For Price - Fixed Price	0392	0291		
30	“Sell By…” title - F.P. + Weigh	0010	0317		

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
31	“Total Price” title - F.P. + Weigh	0350	0195		
32	“Total Price” title - Weighed	0350	0195		
33	Single Piece - Fixed Price	0157	0291		
34	“PC” symbol - Fixed Price	0224	0287		
35	Tare Weight	0338	0247		
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Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS

- use → key to select X (Width) or Y (Height)

Format 2: 64mm × 47mm Label with Barcode

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
00	Label Image Size	0600	0470	**(Fixed)**	**(Fixed)**
01	Barcode	0030	0260		
02	Pack Date	0185	0335		
03	Expire Date	0020	0335		
04	Unit Price ($/lb)	0345	0335		
05	Weight	0475	0335		
06	Total Price	0405	0185		
07	Discounted Total Price	0440	0190		
08	Price Before Discount	0440	0155		
09	PLU Number	0325	0192		
10	PLU Description	0015	0470		
11	Store Address	0015	0035		
12	Store Name	0015	0060		
13	“Sell By…” title - Weighed	0025	0360		
14	“Sell By” title - Fixed Price	0025	0360		
15	“Total Price” title - Fixed Price	0416	0251		
16	Total Ounces	0336	0287		
17	Pounds - inside ( )	0434	0287		
18	Ounces - inside ( )	0510	0287		
19	“oz” symbol - Total Ounces	0394	0276		
20	“(” symbol	0416	0287		
21	“)” symbol	0572	0287		
22	“lb” symbol - inside ( )	0471	0278		
23	“oz” symbol - inside ( )	0549	0278		
24	Piece Count - Fixed Price	0155	0335		
25	“PCS” symbol - Fixed Price	0225	0330		
26	@ Count - Fixed Price	0305	0335		
27	“@” symbol - Fixed Price	0285	0330		
28	“/” symbol - Fixed Price	0375	0330		
29	@/For Price - Fixed Price	0390	0335		
30	“Sell By…” title - F.P. + Weigh	0025	0360		

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
31	“Total Price” title - F.P. + Weigh	0416	0251		
32	“Total Price” title - Weighed	0416	0251		
33	Single Piece - Fixed Price	0155	0335		
34	“PC” symbol - Fixed Price	0225	0330		
35	Tare Weight	0336	0287		
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Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS

- use → key to select X (Width) or Y (Height)

Format 3: 64mm × 85mm Safe Handling Label with Barcode

		Old Value		New Value	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
00	Label Image Size	0600	0850	**(Fixed)**	**(Fixed)**
01	Barcode	0030	0260		
02	Pack Date	0185	0335		
03	Expire Date	0020	0335		
04	Unit Price ($/lb)	0345	0335		
05	Weight	0475	0335		
06	Total Price	0405	0185		
07	Discounted Total Price	0440	0190		
08	Price Before Discount	0440	0155		
09	PLU Number	0325	0192		
10	PLU Description	0015	0830		
11	Store Address	0015	0035		
12	Store Name	0015	0060		
13	“Sell By…” title - Weighed	0025	0360		
14	“Sell By” title - Fixed Price	0025	0360		
15	“Total Price” title - Fixed Price	0416	0251		
16	Total Ounces	0336	0287		
17	Pounds - inside ( )	0434	0287		
18	Ounces - inside ( )	0510	0287		
19	“oz” symbol - Total Ounces	0394	0276		
20	“(” symbol	0416	0287		
21	“)” symbol	0572	0287		
22	“lb” symbol - inside ( )	0471	0278		
23	“oz” symbol - inside ( )	0549	0278		
24	Piece Count - Fixed Price	0155	0335		
25	“PCS” symbol - Fixed Price	0225	0330		
26	@ Count - Fixed Price	0305	0335		
27	“@” symbol - Fixed Price	0285	0330		
28	“/” symbol - Fixed Price	0375	0330		
29	@/For Price - Fixed Price	0390	0335		
30	“Sell By…” title - F.P. + Weigh	0025	0360		

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
31	“Total Price” title - F.P. + Weigh	0416	0251		
32	“Total Price” title - Weighed	0416	0251		
33	Single Piece - Fixed Price	0155	0335		
34	“PC” symbol - Fixed Price	0225	0330		
35	Tare Weight	0336	0287		
36	Safe Handling Panel	0010	0716		
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Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS

- use → key to select X (Width) or Y (Height)

Format 4: 64mm × 59mm Safe Handling Label with Barcode

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
00	Label Image Size	0600	0600	**(Fixed)**	**(Fixed)**
01	Barcode	0010	0205		
02	Pack Date	0436	0240		
03	Expire Date	0436	0280		
04	Unit Price ($/lb)	0185	0250		
05	Weight	0020	0250		
06	Total Price	0405	0150		
07	Discounted Total Price	0440	0160		
08	Price Before Discount	0440	0125		
09	PLU Number	0305	0192		
10	PLU Description	0025	0600		
11	Store Address	0015	0035		
12	Store Name	0015	0060		
13	“Sell By…” title - Weighed	0330	0275		
14	Total Ounces	0325	0205		
15	Pounds - inside ( )	0435	0205		
16	Ounces - inside ( )	0510	0205		
17	“oz” symbol - Total Ounces	0385	0195		
18	“(” symbol	0415	0205		
19	“)” symbol	0575	0205		
20	“lb” symbol - inside ( )	0475	0195		
21	“oz” symbol - inside ( )	0550	0195		
22	Piece Count - Fixed Price	0040	0255		
23	“PCS” symbol - Fixed Price	0090	0250		
24	“Sell By…” title - F.P. + Weigh	0330	0275		
25	Single Piece - Fixed Price	0040	0255		
26	“PC” symbol - Fixed Price	0090	0250		
27	“Sell By” title - Weighed	0330	0275		
28	Tare Weight	0350	0200		
29					
30					

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
31					
32					
33					
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Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS

- use → key to select X (Width) or Y (Height)

Format 5: 64mm × 37mm Non Barcode Label

		Old Value		New Value	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
00	Label Image Size	0600	0380	**(Fixed)**	**(Fixed)**
01	Pack Date	0010	0225		
02	Expire Date	0010	0160		
03	Unit Price ($/lb)	0155	0225		
04	Weight	0285	0225		
05	Total Price	0415	0210		
06	Discounted Total Price	0430	0210		
07	Price Before Discount	0430	0175		
08	PLU Number	0470	0110		
09	PLU Description	0010	0375		
10	Store Address	0015	0030		
11	Store Name	0015	0055		
12	“Packed On…” title - Weighed	0020	0260		
13	“Packed On…” title - Fixed Price	0020	0260		
14	“Total Price” title - Fixed Price	0415	0260		
15	Total Ounces	0160	0160		
16	Pounds - inside ( )	0257	0160		
17	Ounces - inside ( )	0335	0160		
18	“oz” symbol - Total Ounces	0219	0150		
19	“(” symbol	0242	0160		
20	“)” symbol	0400	0160		
21	“lb” symbol - inside ( )	0299	0150		
22	“oz” symbol - inside ( )	0377	0150		
23	Piece Count - Fixed Price	0145	0195		
24	“PCS” symbol - Fixed Price	0185	0193		
25	@ Count - Fixed Price	0250	0195		
26	“@” symbol - Fixed Price	0235	0193		
27	“/” symbol - Fixed Price	0290	0193		
28	@/For Price - Fixed Price	0305	0195		
29	“Packed On…” title - F.P. + Weigh	0020	0260		
30	“Total Price” title - F.P. + Weigh	0415	0260		

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
31	“Total Price” title - Weighed	0415	0260		
32	Single Piece - Fixed Price	0145	0195		
33	“PC” symbol - Fixed Price	0185	0193		
34	“Sell By” title - Fixed Price	0025	0190		
35	“Sell By” title - Weighed	0025	0190		
36	“Sell By” title - Fix. Pr. + Weigh	0025	0190		
37	Tare Weight	0340	0160		
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39					
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Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS
- use → key to select X (Width) or Y (Height)

Format 6: 64mm × 59mm Extended Text Label with Barcode

(Not available in all versions)

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
00	Label Image Size	0600	0590	**(Fixed)**	**(Fixed)**
01	Barcode	0030	0275		
02	Pack Date	0185	0330		
03	Expire Date	0020	0330		
04	Unit Price ($/lb)	0345	0335		
05	Weight	0475	0335		
06	Total Price	0405	0195		
07	Discounted Total Price	0440	0195		
08	Price Before Discount	0440	0160		
09	PLU Number	0325	0241		
10	PLU Description	0020	0590		
11	Store Address	0015	0035		
12	Store Name	0015	0060		
13	“Sell By…” title - Weighed	0025	0360		
14	“Sell By” title - Fixed Price	0025	0360		
15	“Total Price” title - Fixed Price	0416	0251		
16	Total Ounces	0336	0287		
17	Pounds - inside ( )	0434	0287		
18	Ounces - inside ( )	0510	0287		
19	“oz” symbol - Total Ounces	0394	0276		
20	“(” symbol	0416	0287		
21	“)” symbol	0572	0287		
22	“lb” symbol - inside ( )	0471	0278		
23	“oz” symbol - inside ( )	0549	0278		
24	Piece Count - Fixed Price	0155	0335		
25	“PCS” symbol - Fixed Price	0225	0330		
26	@ Count - Fixed Price	0305	0335		
27	“@” symbol - Fixed Price	0285	0330		
28	“/” symbol - Fixed Price	0375	0330		
29	@/For Price - Fixed Price	0390	0335		
30	“Sell By…” title - F.P. + Weigh	0025	0360		

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
31	“Total Price” title - F.P. + Weigh	0416	0251		
32	“Total Price” title - Weighed	0416	0251		
33	Single Piece - Fixed Price	0155	0335		
34	“PC” symbol - Fixed Price	0225	0330		
35	Tare Weight	0336	0287		
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Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS
- use → key to select X (Width) or Y (Height)

Format 7: 64mm × 85mm Extended Text Label with Barcode

(Not available in all versions)

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
00	Label Image Size	0600	0850	**(Fixed)**	**(Fixed)**
01	Barcode	0030	0275		
02	Pack Date	0185	0330		
03	Expire Date	0020	0330		
04	Unit Price ($/lb)	0345	0335		
05	Weight	0475	0335		
06	Total Price	0405	0195		
07	Discounted Total Price	0440	0195		
08	Price Before Discount	0440	0160		
09	PLU Number	0325	0241		
10	PLU Description	0020	0845		
11	Store Address	0015	0035		
12	Store Name	0015	0060		
13	“Sell By…” title - Weighed	0025	0360		
14	“Sell By” title - Fixed Price	0025	0360		
15	“Total Price” title - Fixed Price	0416	0251		
16	Total Ounces	0336	0287		
17	Pounds - inside ( )	0434	0287		
18	Ounces - inside ( )	0510	0287		
19	“oz” symbol - Total Ounces	0394	0276		
20	“(” symbol	0416	0287		
21	“)” symbol	0572	0287		
22	“lb” symbol - inside ( )	0471	0278		
23	“oz” symbol - inside ( )	0549	0278		
24	Piece Count - Fixed Price	0155	0335		
25	“PCS” symbol - Fixed Price	0225	0330		
26	@ Count - Fixed Price	0305	0335		
27	“@” symbol - Fixed Price	0285	0330		
28	“/” symbol - Fixed Price	0375	0330		
29	@/For Price - Fixed Price	0390	0335		
30	“Sell By…” title - F.P. + Weigh	0025	0360		

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
31	“Total Price” title - F.P. + Weigh	0416	0251		
32	“Total Price” title - Weighed	0416	0251		
33	Single Piece - Fixed Price	0155	0335		
34	“PC” symbol - Fixed Price	0225	0330		
35	Tare Weight	0336	0287		
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Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS

- use → key to select X (Width) or Y (Height)

Format 8: 64mm × 85mm Reduced Safe Handling Label

(Not available in all versions)

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
00	Label Image Size	0600	0850	**(Fixed)**	**(Fixed)**
01	Barcode	0030	0275		
02	Pack Date	0185	0330		
03	Expire Date	0020	0330		
04	Unit Price ($/lb)	0345	0335		
05	Weight	0475	0335		
06	Total Price	0405	0195		
07	Discounted Total Price	0440	0195		
08	Price Before Discount	0440	0160		
09	PLU Number	0325	0241		
10	PLU Description	0020	0845		
11	Store Address	0015	0035		
12	Store Name	0015	0060		
13	“Sell By…” title - Weighed	0025	0360		
14	“Sell By” title - Fixed Price	0025	0360		
15	“Total Price” title - Fixed Price	0416	0251		
16	Total Ounces	0336	0287		
17	Pounds - inside ( )	0434	0287		
18	Ounces - inside ( )	0510	0287		
19	“oz” symbol - Total Ounces	0394	0276		
20	“(” symbol	0416	0287		
21	“)” symbol	0572	0287		
22	“lb” symbol - inside ( )	0471	0278		
23	“oz” symbol - inside ( )	0549	0278		
24	Piece Count - Fixed Price	0155	0335		
25	“PCS” symbol - Fixed Price	0225	0330		
26	@ Count - Fixed Price	0305	0335		
27	“@” symbol - Fixed Price	0285	0330		
28	“/” symbol - Fixed Price	0375	0330		
29	@/For Price - Fixed Price	0390	0335		
30	“Sell By…” title - F.P. + Weigh	0025	0360		

		Old Value		**New Value**	
Field #	Field Description	X (0) Width	Y (1) Height	**X (0) Width**	**Y (1) Height**
31	“Total Price” title - F.P. + Weigh	0416	0251		
32	“Total Price” title - Weighed	0416	0251		
33	Single Piece - Fixed Price	0155	0335		
34	“PC” symbol - Fixed Price	0225	0330		
35	Tare Weight	0336	0287		
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Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS

- use → key to select X (Width) or Y (Height)

A.3 Communication Cable Wiring Diagram

The Astra may communicate by RS-232 connection to a PC. It may also communicate to another Astra scale for the purpose of copying data from one machine to another.

The cable pin assignments are listed below for several types of cables.

Astra to PC and ***Astra to Astra*** Null Modem Cable

Astra	Cable		Cable	PC or Astra
9-pin	9-pin	———	9-pin	9-pin
Male	Female		Female	Male

RXD	2	———	3	TXD
TXD	3	———	2	RXD
SG	5	———	5	SG

Astra to PC Null Modem Cable

Astra	Cable		Cable	PC
9-pin	9-pin	———	25-pin	25-pin
Male	Female		Female	Male

RXD	2	———	2	TXD
TXD	3	———	3	RXD
SG	5	———	7	SG

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